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TRANSACTIONS

OF THE

ETHNOLOGICAL SOCIETY OF LONDON.

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OF LONDON.

VOL. VI.

NEW SERIES.

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LONDON: T. RICHARDS, 37, GREAT QUEEN STREET.

Ethnological Society of London,

FOR THE

STUDY OF THE HUMAN RACE IN ALL ITS VARIETIES, AND IN ALL THE PHASES OF ITS HISTORY AND PROGRESS.

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By an oversight, and in consequence of the absence of the author of paper, in Dr. Collingwood's paper, p. 135, *Sano Bay* has been pri instead of *Sau-o*. The *u* was misread for an *n*.

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TRANSACTIONS

OF THE

ETHNOLOGICAL SOCIETY OF LONDON.

I.—*The "Kols" of Chota-Nagpore.* By Lieut-Col. E. T. Dalton, Commissioner of Chota-Nagpore.

[*Read January 8th,* 1867.]

The country called Chota (or properly Chuttia) Nagpore* is the eastern portion of the extensive plateau of Central India, on which are the sources of the Koel, the Soobunreka, the Damoodah, and other less known Indian rivers. It extends into Sirgoojah, and forms what is called the Oopur Ghat or highland of Juspore, and it is connected by a continuous chain of hills with the Vindhyan and Kymore ranges, from which flow affluents of the Ganges, and with the highlands of Omerkuntuck, on which are the sources of the Nurbudda. That the population of this watershed is found to be, for the most part, a heterogeneous collection of non-Aryan tribes, is in itself a fair proof that these tribes were at one time the inhabitants of the plains who, driven from their original sites at different periods by Braminical invaders, gradually fell back, following converging lines of rivers in their retreat, till, from different directions, nations, some bearing marks of common origin though separated for ages, others bearing no trace of such affinity, met at the sources of the streams, and formed new nationalities in the secure asylum they found there.

The plateau averages more than 2,000 feet above the sea level; it is on all sides somewhat difficult of access, and it is owing to the security thus given, that the primitive tribes, still found on it, retained for ages so much of their independence and idiosyncrasy. After overcoming the difficulties of the approach, these first settlers must have rejoiced at finding they had not merely reached the summit of a range of hills, but had ascended to a new country, well suited to their wants,

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* *I.e.* Little Nagpore.—Editor.

and out of reach of their enemies; and here they made their final stand.

They found a genial climate at this elevation, and a well-wooded undulating country, divided and diversified by interior ranges of hills, uplifting the fertilising streams, or breaking out in rocky excrescences, sometimes in vast semi-globular masses of granite, like sunken domes of gigantic temples, sometimes in huge fragments piled in most fantastic forms, viewed with awe by the new settlers as the dwelling-places of the local gods.

The total area of the plateau thus occupied is about 7,000 square miles, and the present population may be estimated at a million; more than half of whom are of the race best known to us by the name of "Kol."

This word is one of the epithets of abuse applied by the Braminical races to the aborigines of the country who opposed their early settlement, and it has adhered to the primitive inhabitants of Chota-Nagpore for ages. It includes many tribes: the people of this province to whom it is generally applied, are either Moondah or Oraon; and though these races are now found in many parts of the country occupying the same villages, cultivating the same fields, celebrating together the same festivals, and enjoying the same amusements, they are of totally distinct origin and cannot intermarry without loss of caste.

The received tradition is, that the Moondahs first occupied the country, and had been long settled there, when the Oraons made their appearance. The Moondahs believe themselves to be autochthonous, or at all events declare that they are all descended from one man and woman, who were produced or established themselves, at a place called Satyomba, which is revered by the whole tribe as the cradle of the race.

Satyomba is the name of a pergunnah* on the edge of the plateau overlooking the valley of the Damoodah. It is not improbable that the Moondah race had previously occupied a position on that river, and that, in departing from it, the division took place which separated them from their brethren the Sonthals. The Sonthals, unquestionably a branch of the same people, have to this day a veneration for the Damoodah, and call it their *sea;* and the ashes of their dead are always preserved till they have the opportunity of disposing of them by throwing them into that stream or burying them near its banks. The Sonthals, remaining in the plains, had easy access to the river and retained their veneration for it. The Moondahs, settling on the highlands, were less faithful to it, but

* Correctly, *pargana*, a district or province.—EDITOR.

from its name they might claim it as their own; for, though Damoodur has been adopted as one of the sacred names of "Krishno," does not Dah-Moondah in their own language mean "the water of the Moondah"?

We find the Moondah settlements chiefly in the eastern and southern parts of Chota-Nagpore, the Oraons predominating in the western; and this strengthens the hypothesis that the Moondahs ascended from the eastern side of the plateau.

The intimate connection between the Sonthals, the Bhoomij, and the Chota-Nagpore Moondah tribes, has long been known. I have pointed out their affinity with the Korewahs of Sirgoojah and Juspoor, and have given some account of that wild clan.* I have now to add to the list the Kheriahs, another aboriginal tribe settled on the plateau of Chota-Nagpore, and the Juangas of the Cuttack tributary mehals,† whose women are so conservative in their notions, that they still adhere to the fashion in dress first introduced by mother Eve, and wear nothing but leaves. I had often met with individuals and families of the Kheriah tribe, living in mixed communities, but from contact with other races they had lost much of their individuality, and I found it difficult to place them.

This year I happened to come upon some of their principal settlements in pergunnah Bussiah, on the southern borders of the portion of the plateau occupied by the Moondahs, and collected round me the elders of the tribe. These settlements all lie near the Koel, one of the streams from the watershed of Chota-Nagpore, which, after its union with the Sunkh in Gangpore, becomes the Bramni and terminates its career at Point Palmyras.

The Kheriahs venerate the Koel as the Sonthals the Damoodah. They were in all probability once settled on its banks in the lowlands, and clinging to it in their retreat and adopting the place of refuge that it led to, regard it still as communicating with their fatherland, and with this idea the urns containing the ashes of their dead are dashed into a rock-broken rapid of the river, so that their contents may be rapidly borne away by the current to mingle with the ashes of their forefathers.

They say their first settlement was Pora, a village on the Koel, and that there were no Moondahs in the country, at least in that part of it, when their ancestors first came there. There is sufficient resemblance between the Kheriahs and Moondahs in language and customs and appearance, to make

* Asiatic Soc. Journal, vol. xxxiv, p. 1.

† Correctly, *mahal*, from the Arabic, a department.—EDITOR.

us certain of their consanguinity, and at the same time sufficient divergence to lead to the inference that the relationship is a remote one, and that the two branches of the family had been long separated when they met again on the banks of the Koel. These points of resemblance and divergence I will describe, when treating of the manners and customs of the race generally.

The Juangas or Puttoons (leaf-clad) are noticed in a paper by Mr. E. A. Samuells.* They are found in the Cuttack tributary mehuls of Keonjur, Pal Lehra, Dhekenal, and Hindole. They are thus isolated from all other branches of the Moondah family, and have not themselves the least notion of their connection with them; but their language, a specimen of which is given in the table appended, shews they are of the same race, and that their nearest kinsmen are the Kheriahs, a fragment of the tribe left behind when the remainder ascended the valley of the Koel. The Hos of Singbhoom have a tradition that they once wore leaves only, and not long ago threatened to revert to them, unless cloth-sellers lowered their prices!

The Bhoomij form the majority of the population in all the estates of the Manbhoom district to the south of the Kassae river. As they approach the confines of Chota-Nagpore, they appear to be called indiscriminately Moondahs or Bhoomij, and they intermarry. More in the east the Bhoomij have become Hindooised, or rather Bengaleeised, to a great extent, and many of them have acquired considerable estates, like the Mankees of Chota-Nagpore, and positions of influence as "Sirdar Ghatwalls," the hereditary custodians of the passes.

The characteristics of the tribe that they most tenaciously cling to, are the national dances and songs. The Bhoomij appear to have been the first to colonise the large pergunnah called Dhulbhoom or Ghatsillah, attached to the Singbhoom district. The Rajah or Zemindar is, in all probability, himself a Bhoomij by race, though (without thereby improving his pedigree, so far as I can see) he endeavours to conceal his extraction under one of those hazy traditions that Brahmins always have ready for families in want of them. His ancestor, according to their version, was a washerman, a Dhoby who saved the goddess Kali,† when, as Runkini, she ran away from Pochete. Discredit has attached to the Bhoomij and Sonthal in consequence of the human sacrifices offered at this shrine of

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* Asiatic Soc. Journal, vol. xxv, p. 295, 1856.

† Kali or Durga, spouse of Siwa, "the destroyer" of the Tendu Triad.—EDITOR.

Runkini, but the whole establishment and ritual are essentially Braminical. The Bhoomij and Sonthal races personally do not much care for the bloodthirsty goddess. The Bhoomij is the branch of the Moondah race that has spread farthest in an eastern direction. Bhoomij are to be found in Mohurbhunj and Keonjur, though perhaps not so much at home there as in Dhulbhoom.

The Sonthals are now chiefly massed in the Sonthal Pergunnahs, but they muster strong in Mohurbhunj, and there are several colonies of them in the Singbhoom district. They are an erratic race, and their ancient traditions are lost in the history of their modern migrations; but my idea is that their chief settlements in Bengal were once on the Damoodah river, and that they gave way to the Koormees, an industrious Hindoo race, who now form the bulk of the population in that part of Manbhoom.

In a southerly direction the next tribe of "Dasyus" that we come across are the Khunds, but I am unable to trace any point of resemblance between them and the Moondah, either in their religion, with its morbid superstitions and horrible human sacrifices, or in their language.

To trace the further ramifications of the Moondahs, we must proceed west, not south, and take up the link in the hills and highest table-lands of Sirgoojah and Juspore, where we find the wildest of the race in the Korewahs. I have given a brief note on them in the paper above quoted, and have only to add that the Korewahs are quite unaware of the connectionship between themselves and the Kols. They do not acknowledge, and do not see, that the languages are almost identical. This would not, I conceive, have been the case if the Korewahs had broken off from their Satyomba kinsfolk.

The Korewahs are another branch of the family, and the history of their migrations is no doubt an independent one. It is probable that they were forced back into the hills they now occupy by the Gooands, as a Hindooised clan of that people became the dominant race in the plains of Sirgoojah. Moreover, as pointed out by Mr. G. Campbell, at a late meeting of the Asiatic Society, we have in its Journal* a brief notice of a tribe called "Coour Gooand," and a vocabulary which proves them to be not Gooand at all, but another branch of the great family we are describing, occupying the Gavilghur range of hills near Ellichpore. Dr. Latham mentions in connection with them another tribe which he calls Chunah, but I have no further information about them. If the investigation be carried out, we

* Asiatic Soc. Journal, vol. xiii, p. 19.

shall, no doubt, find connecting links in the intervening ranges of hills.

Thus we have in the Coours of Ellichpoor, the Korewahs of Sirgoojah and Juspore, the Moondahs and the Kheriahs of Chota-Nagpore, the Hos of Singbhoom, the Bhoomij of Manbhoom and Dhulbhoom, and the Sonthals of Manbhoom, Singbhoom, Cuttack, tributary mehals, Hazareebagh, and the Sonthal Pergunnahs (the author of the introduction to the Sonthal language, the Rev. J. Phillips, adds "Nâkâles and Kodas," I do not know where they are to be found), a kindred people sufficiently numerous, if united, to form a nation of several millions of souls. They were, in all probability, one of the tribes that were most persistent in their hostility to the Aryan invaders, and thus earned for themselves the epithets of "worshippers of *mad* gods," "haters of Brahmins," "ferocious lookers," "inhuman," "flesh-eaters," "devourers of life," "possessed of magical powers," "changing their shape at will."* To this day, the Aryans settled in Chota-Nagpore and Singbhoom firmly believe that the Moondahs have powers as wizards and witches, and can transform themselves into tigers and other beasts of prey, with the view of devouring their enemies, and that they can witch away the lives of man and beast. It is to the wildest and most savage of the tribe that such powers are generally ascribed; and amongst the Kols themselves the belief in the magic powers of their brethren is so strong, that I have heard converts to Christianity assert they were first induced to turn to our religion, because sorcery had apparently no power over those who were baptised! The upper classes of the Moondahs, those who aspire to be Zemindars,† have assumed the "*poita*" and taken to Brahmins and Kali, but the mass of the people adore their "mad gods" still, after their own primitive fashion. The great propitiatory sacrifices to the local deities or devils are carousals at which they eat, drink, sing, dance, and make love; but though the austere "munis" of old must have stood aghast at such wild ebullitions of devotion, it is a fact that, whilst the mass of the Kols have not taken to the worship of any Hindoo idols, the Hindoos settled in the province think it expedient to propitiate the gods of the Kols. It is gratifying that the darkness in which this primitive and interesting people have so long dwelt, is now being dispelled by a brighter light; that their paganism is at length yielding to the gentle influence of Christian teaching; that there is abroad amongst them a widespread feeling that a change is necessary,

* See Muir's Sanskrit texts.

† Correctly, *Zamindan*, a landholder, from the Persian.—EDITOR.

a change more perfect than can be typified by the adoption of a "*poita.*"*

As the Moondahs first settled at Satyomba spread over the country, they formed themselves into communities called Purhas, or the country was divided into Purhas, each consisting of twelve or more villages under a chief. They do not appear in their earlier days to have acknowledged any chief, superior to the head of the Purha; the ordinary business of the community was conducted by him, and on extraordinary occasions, the Purha chiefs met and took counsel together.

Vestiges of this ancient system are still met with in many parts of the country. Though ignored as geographical or fiscal or territorial divisions, the Purhas still exist in the eyes of the people, and they still have chiefs whom they call Rajahs, men of influence and weight, who preside when a meeting is called to adjudicate regarding breaches of social observances, and who take the lead on the great hunting expeditions and national festivals.

It is said that the Moondahs were in a very wild state, occupying but a small portion of the plateau, when the Oraons, driven from the Rhotas hills, swarmed into the country, and sought and obtained permission to occupy it jointly with the Moondahs. Both Moondahs and Oraons declare there was on this occasion no fighting. The former were glad to obtain assistance in reclaiming the country they had adopted, and the Oraons are said to have come with large herds of cattle and implements of husbandry previously unknown to the Mondahs.

It is probable that the Mondahs of those days were not more advanced than are to this day their brethren, the hill Korewahs of Sirgoojah, a tribe that know not the use of the plough: but they were great hunters, and could sing and dance and make merry. The Oraon youths and maidens speedily acquired the songs and the steps, and this I doubt not aided greatly the harmonious blending of the two peoples.

There are no ancient temples or other antiquities on the plateau of Chota-Nagpore to indicate that the early Braminical races or Buddhists ever obtained a footing there; there is no tradition even of the "Munis"† having sought retreats amongst its rocks or by its waterfalls for their devotional exercises. We find such monuments in Sirgoojah to the very foot of the western face of the plateau; and, as I have recently described in a paper devoted to the antiquities of Manbhoom, we find

* Correctly, *paita*, a patch of level ground in a hilly country.—EDITOR.
† Muni, a Hindu saint.—EDITOR.

numerous remains of Ayran colonisation close to its southern and eastern approaches, but none on the plateau itself. Left to themselves, the Kols increased and multiplied, and lived a happy arcadian sort of life under their republican form of government for many centuries; but it is said that a wily Brahmin at last obtained a footing amongst them, and an important change in the form of government was the result.

The Rajah of the Purha of which Satyomba was the head quarters, was a Moondah named Madura. His occupation of the supposed cradle of the race gave him precedence in the confederate councils; and a child of his house, reared in it if not born there, was, through his influence and by the advice of a Brahmin he had taken into his service, elected supreme chief over the whole confederacy; but as it would not suit the noble family, his descendants, to have it supposed that their ancestor was one of the despised race called Kol, they have adopted the following legend as their origin:—

"When Jonmajoya, Rajah of Hustinapoor, attempted the destruction of the Nags or Serpent race, one of them, Poondorik, assumed the form of a Brahmin and went to the house of a Brahmin at Benares to study the 'shasters.' The Benares Brahmin, pleased with the intelligence and grace of his pupil, gave him his only daughter 'Parbutee' to be his wife. Poondorik and his wife, Parbutee, together visited Juggernath, and on their return, passing through this country, then called 'Jharkhund,' the forest land, she was seized with the pains of labour near Satyomba, and gave birth to a child and died.

"Madura's Brahmin happening to pass, bearing an image of the sun worshipped by the Moondahs, saw the child sleeping and protected by a snake with expanded hood. The snake was Poondorik, relapsed into his original form. He addressed the Brahmin, told his own story and the story of the child's birth, declared that the babe was destined to be a great Rajah, and that his name was to be Funimatuk Roy, 'the snake hood crowned,' a worshipper of the sun, whose image the Brahmin bore, and the Brahmin was to be the family priest. The snake then vanished. The child was taken to Madura's house, and adopted and brought up with his own son, a boy of much the same age. When Funimatuk Roy was twelve years of age, Madura convened the Purha chiefs, and it is said the neighbouring Rajahs, including the Rajah of Sirgoojah and the Dytya Rajah, and suggested that one of the two lads should be selected as the Rajah of Nagpore. The lads were subjected to an examination, when it was found that the snake boy had already acquired all the accomplishments necessary for his destined position, while the other was a mere rustic. It was then

(according to the annals of the Nagbunsee family) ruled, that Funimatuk Roy and his heirs for ever should be the Rajahs, and that the Moondah's child and his descendants should bear burdens; and thus, all who claim to hold lands as descendants of the Moondahs and Oroans that first cleared them, are bound, when called on, to bear the burdens imposed on them by the Rajah and his assigns!"

It is frankly admitted in the annals I quote from, that a difficulty arose regarding Funimatuk's birth, when he sought in marriage the daughter of the Sikurbhoom (or Pochete) Rajah. The Sikurbhoom family priest was sent to examine the certificates of birth, and found none; but Rajah Matuck Roy prayed for the intercession of his *ophidian* parent. He had calmly contemplated his position, and put it to his father, that if the Sikurbhoom priest was not satisfied, a Moondah or an Oroan girl should become Queen of Nagpore. This was not to be thought of. So the nag once more entered an appearance, satisfied the Brahmin by a relation of wonders, and since then the Nagbunsis have always intermarried with the best Rajpoot families. It is particularly noted that at Funimatuk Roy's wedding-feast the Oroans and Moondahs all got drunk and began to fight, and the Rajah of Nagpore and Madurah had to obtain the assistance of his guests, the Rajah of Sirgoojah and the Dytya Rajah to separate them. The Dytya Rajah was, I presume, the Rajah of Patkoom, as that family bear the surname of Adytya to this day.

The marriage was celebrated at Satyomba, and there the first Rajah resided in a mud fort. The fourth in descent from Funimatuk moved his court to Chuttia, where we have the remains of a fort with masonry walls, and some stone temples ascribed to him. Subsequently Doisa was chosen as the seat of government, and here are some fine buildings, showing that the family were improving in art and in civilisation when they moved there. This site also has been abandoned, and the present Rajah lives in a very mean house at Palkote.

The sway of the Rajah of Chota-Nagpore does not, in early times, appear to have exended beyond the plateau or fringe of hills which divide it from the plains; but the Moondahs overran those limits and formed colonies in what are now called the five pergunnahs—Silli, Tamar, Barundah, Rabey, and Boondoo—which did not acknowledge the Rajah-elect of Satyomba. In time, each of these pergunnahs elected a Rajah of its own, who (their descendants declare) were each of a divine or miraculous birth, like Funimatuk Roy; and on the strength of it they all call themselves Chuttrees, and wear the cord. They intermarry amongst themselves, or with the petty Rajahs of Man-

bhoom, who are of similar origin; so their claim to be Chuttrees, or, at all events, Hindoos of respectable caste, is not disputed. According to their own tradition, the Rajahs of the five pergunnahs first forfeited their independence by submitting to pay tribute to the Rajah of Cuttack. Eventually, however, they were subjugated by the Maharajah of Chota-Nagpore, and submitted to pay tribute to and accept the "Tilluck" or symbol of investiture from him. The Moondahs comprise about two-thirds of the population of the five pergunnahs, and all who are not Moondahs are settlers of no very ancient date.

Iu the northern and western parts of Chota-Nagpore, the authority of the old Moondah or Oraon chiefs has been almost effaced by the middlemen who have been introduced by the Zemindars, as more profitable farmers, or by the Brahmins, Rajpoots, and others to whom, for religious or secular services, grants have been made by the Maharajah and members of his family holding under him. In many instances the Kols have been entirely dispossessed of the lands their ancestors brought under cultivation, and ryots from other parts of India, more subservient to the wishes of the farmers, have been introduced. In some villages the peasant proprietary right of the aborigines has been entirely extinguished, and the few of that class that remain are found in the position of farm labourers.

In the southern parts of Chota-Nagpore, the Moondah chiefs, there as in Singbhoom called Mankees, have managed to retain their position, first, by resisting in open arms all attempts to encroach upon it, and lastly, by a settlement suggested and brought about by the officers of the British Government, and concluded with the Maharajah shortly after the Kol disturbances in A.D. 1833.

These Mankees have each under them about as many villages as formerly were included in a "Purha," and they pay a quit rent to the Maharajah as a commutation of the service and tribute in kind formerly paid to him as lord paramount; and they collect this and a little more, as the contribution for their own support, from the heads of villages, who again collect according to ancient custom at fixed rates from the villagers. There is fixity of tenure throughout, from the Maharajah to the cultivator, notwithstanding the intervention of the Mankee, the village Moondah, or Mohto. This is no doubt a living exemplification of the relation that, in older times, subsisted between the cultivator of the soil and his chief in most parts of India.

In the Hoor Lurka Kols of Singbhoom we have a people who, till recently, had no notion of what it was to pay rent to any one, or even to give pecuniary support to their chiefs. They had their Mankees and Moondahs; but no one exercised any

right arising from a title in the land except the cultivators. We have a very interesting description of the Hos, their country, and their languages, by Colonel Tickell,* and to this, before proceeding further with my memoir, I will add a brief sketch of their history.

The Singbhoom district is of a singular interest to the ethnologist. That portion of it called the Colehan, the Ho-desum or country proper of the Hos, is a series of fair and fertile plains, broken, divided, and surrounded by hills; about sixty miles in length from north to south, and from thirty-five to sixty in breadth from east to west. It has to the south and south-east the tributary estates, Mohurbun, Keonjur, Bonai, and Gangpore, inhabited by Ooriah-speaking Hindoos, to the east and north the Bengalee pergunnah of Dhulbhoom and district of Manbhoom, and north and north-east the Hindee district of Lohardaggah, and it is occupied by a race totally distinct by descent, custom, religion, and language from any of the three. A people on whose smiling country covetous eyes have often been directed, but into which no one ever attempted with impunity to intrude.

It is impossible to say when the Hos first entered Singbhoom; but as we find that the Chota-Nagpore Moondahs more and more assimilate to the Hos, as we approach Singbhoom from Chota-Nagpore, we may safely infer that the Hos came originally from that country; and this is their own tradition. They appear to have brought with them and retained their system of confederate government by Purhas; but in Singbhoom the word now used to express it, is Pirhi or Peer. Thus the Colehan is divided into Pirhis, each under a Mankee as chief of the Pirhi, and each village having its Moondah or headman.

According to their own tradition, the Hos displaced a nation of Jains† settled in the eastern parts of Singbhoom, some remains of whom are still extant, and a nation of Bhuyahs from the western and southern parts, driving them out of, and appropriating to their own exclusive use, the richest part of the country. From these early times, probably more than two thousand years ago, they have proudly held the country they acquired; and, in my humble opinion, they have the right to say they never submitted to rulers of an alien race, till they were forced to do so by the power of the British Empire.

At the commencement of the present century, Singbhoom

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* Asiatic Soc. Journal, vol. ix, pp. 783, 997, 1063.

† The name of a Hindu religious sect, whose doctrines much resemble those of the Buddhists, who themselves no longer exist in Hindustan.—EDITOR.

was only known to the British Government as a country under the rule of certain Rajpoot chiefs, all of one family, whose independence, when we first occupied the Orissa Provinces, Lord Wellesley promised to respect. After the final cession of all the surrounding districts in 1819, these chiefs, occupying a territory that embraces the Colehan, voluntarily submitted to the British Government, and immediately sought the assistance of that Government in reducing the "Hos" to submission, asserting that the Hos were their subjects then in rebellion; but they admitted that for fifty years they had exercised no authority over them, and I find no proof that the Hos had at any former period ever submitted to them. It is not pretended that they were conquered; but supremacy was claimed by the Rajpoot Rajahs over the Ho tribes next to them, thus dividing the country and the people amongst four Rajpoot chiefs, the Rajahs of Mohurbhunj and Perahat, Koer of Seraikilla, and Thakoor of Khursowan.

It is true that the chiefs of Singbhoom, ancestors of the Rajahs of Porahut, Seraikilla and Thakoor of Khursowan, obtained great influenee over their wild neighbours. They were gradually induced to believe tales which gave to the founder of this family a miraculous birth in their country, and they accorded to him divine honours, whilst they repudiated the idea of his being their temporal chief. The oldest surviving member of the Porahat family tells me that no regular tribute was ever received from the Colehan; but they were treated and employed rather as friendly allies than as subjects, and at certain seasons presents of trifling value were received from them, and presents given in return.

When a division of the estate of a Singbhoom chief occurred, the brothers each took, with the share assigned to him, a share in the goodwill of the Hos. Thus the Seraikilla and Khursowan families claimed the allegiance of the tribes nearest to them. The claim of the Mohurbhunj Rajah sprang up as the Kols extended their cultivation, till it touched or ran over his boundary. But it is admitted that all recorded attempts of the Rajpoot chiefs to subdue them had been signally defeated.

On the last occasion, the great grandfather of the present Maharajah of Chota-Nagpore, at the head of twenty thousand of his own men co-operating with the forces of the Singbhoom Rajpoot chiefs, entered the Colehan. The Hos allowed him to do this; they then fell on his army in masses, and, routing it with immense slaughter, ignominiously expelled him, pursuing him into his own territory, and severely retaliating on the border villages of the Maharajah and his allies.

It was no doubt in retaliation for these attacks on their inde-

pendence that the Hos now became, as they were found to be when first brought to our notice (in 1819-20), the scourge of the inhabitants of the more civilised parts of Singbhoom and of all the surrounding districts. They shewed no mercy to the Brahminical inhabitants of the villages which they attacked and pillaged. A long line of Brahmin villages on the Brahmin river in Gangpoor were laid waste by them, and have remained depopulated ever since. No traveller ever ventured to pass through their country. No Brahmin, Rajpoot, or other Hindoo caste, or Mussulman, was suffered to reside in it.

In 1820, the Agent Governor-General, Major Roughsedge, entered the Colehan at the head of a force consisting of a battalion of infantry, with cavalry and artillery. He was surprised to find the wild race, of whom he had heard such disparaging accounts, in possession of an open undulating and richly cultivated country, studded with villages in groves of magnificent tamarind and mango trees, abounding in unusual indications of rural wealth. He was allowed to enter on this scene unmolested; but the slaughter of some of his camp-followers, who had incautiously strayed into one of the villages, demonstrated the hostility of the people, and an attempt to capture the murderers brought about the first collision between the Hos and our troops. A party of cavalry, sent to the offending village, was met in the open field by three hundred warriors, who undauntedly advanced to meet the charge, rushed between the ranks of the horsemen, hacking especially at the horses with their formidable battle-axes, and showing no disposition to yield or to turn, till half their number had been sabred or shot. In the village where the murder was committed was found a reserve of sixty men, who fought desperately, and were all killed! The same evening another body of Lurkahs* attacked the rear of the column and cut off a convoy of supplies. It became necessary to act with vigour, and the old Hos of the present day describe the retaliation that now fell upon them as dreadfully severe. Eventually some intercepted mails were restored uninjured, as a token of submission, and the Lurka chiefs in the vicinity entered into engagements to acknowledge and pay tribute to the Rajah of Singbhoom.†

Major Roughsedge met with further opposition in his progress towards Sumbulpoor through the Southern Peers: he had in fact to fight his way out of the country; and on his leaving it a war broke out between the Kols who had submitted, and those who had not. One hundred Hindustanee

* "Laraka", the fighters, a common name for the Hos.
† Major Roughsedge's Despatches.

burkundazes, under a Soobadar, were sent by the Agent to the support of the Rajah and his Lurka allies, and this for a time gave them the advantage; but the Soobadar having been induced to enter the Colehan to assist in levying a contribution, was attacked, and he and the *whole of the party cut up!*

In 1821, a large force was employed to reduce the Lurkas to submission, and, after a month's hostilities, the leaders, encouraged by a proclamation, surrendered and entered into engagement, binding themselves to subjection to the British Government, and agreeing to pay to the chiefs at the rate of eight annas for each plough. It was now noticed that the Lurkas evinced a perfect willingness to be guided and ruled by British officers, and the utmost repugnance to the authority arrogated over them by the Singbhoom chiefs; and it would have saved much blood, expense, and trouble if this feeling had at the time been taken advantage of. Made over to the chiefs, they soon again became restive, and reverted to their old practices of resistance and pillage. The circle of depredations gradually increased, till it had included Dhulboom, devastated Bamunghatee, and extended to some parts of Chota-Nagpore. The chiefs under whom the Lurkas had been placed could not control them, and for some five years, from 1830 to 1836, the Hos maintained this hostile attitude.

In consequence of this unsatisfactory state of affairs, a proposal made by Captain Wilkinson in August, 1836, to employ a force and thoroughly subdue the Lurkas, and then to take the whole tribe under the direct management of British officers, was favourably received by Government, and promptly acted on. Two regiments of infantry and two brigades of guns entered Singbhoom in November, 1836, and operations were immediately commenced against the refractory Peers; and by February following all the Mankees and Moondahs had submitted, and bound themselves by fresh engagements to obey and pay revenue to the British Government, and no longer to follow the orders of the chiefs to whom they had previously been required to submit. Six hundred and twenty-two villages, with a population estimated at ninety thousand souls, of whom more than three-fourths are Hos, were thus brought and have since remained under the immediate control of the British Government. Since then, the population and spread of cultivation have immensely increased, and the people are now peaceful, prosperous, and happy. From the region round about the station, Chybassah, one hundred and seventy miles due west from Calcutta, the waste lands have entirely disappeared. Colonies of Hindus may now be found settled in the heart of the Colehan, occupying villages apart from the Hos, but with-

out demur placing themselves under the Ho Mankees of Peers. For their own system of government is, as far as possible, preserved, and the Mankees are officers of police as well as the tuhsildars or rent-collectors of their circles. One great change is now being peaceably introduced, the old system of assessment on ploughs is under process of commutation to a light assessment on the land.

This is, undoubtedly, the nucleus of the Moondah nation, the most compact, the purest, most powerful, and most interesting division of the whole race, and in appearance decidedly the best looking. In their erect carriage and fine manly bearing, the Hos look like a people that have maintained and are proud of their independence. Many have features of sufficiently good caste to entitle them to rank as Aryans; high noses, large but well formed mouths, beautiful teeth, and the facial angle as good as in the Hindu races. The figures both of male and female, freely displayed by the extreme scantiness of the national costume, are often models of beauty; but this description applies only to the people of the highly cultivated part of the country who have seldom been subjected to severe privation, and who generally fare right well. The inhabitants of the imperfectly reclaimed hill forests are more savage-looking; but they seldom deteriorate to the almost simian physiognomy that the Oraons are found with under similar circumstances. When the face of the Moondah varies from the Aryan or Caucasian type, it appears to me rather to merge into the Mongolian than the Negro. High cheek-bones, small openings for the eyes, having in some rare instances a tendency to the peculiar oblique set of the Mongolian, and flattish faces without much beard or whisker. They are of average stature, and in colour vary from brown to tawny yellow.

II.—THE ORAONS.

The Oraons have a tradition that they were once settled in Guzerat. They were expelled from that part of India, and retreating east, made a stand at fort Kalinjur, where they fought the "Loorik Sowrik" of "Palipipri," were defeated, and, retreating still east, settled on the Rhotas Hills. Here, they say, they remained unmolested till attacked and driven from the hills by the Mahomedans in the reign of the emperor Akbar; but as they aver this occurred fifty-two generations ago, there is an anachronism somewhere. I think they were settled in Chota-Nagpore centuries before the days of Akbar; but it is probable that some of the clan remained in the Rhotas hills until the Mahomedans constructed their fortress there.

The accounts of ancient Guzerat faintly confirm the Oraon

tradition. I find from Thornton's Gazetteer that there is a race settled there from remote antiquity who are called Coolies; but there is nothing in the name, which, as I observed before, appears to have been applied very generally to the aborigines by the Aryans, and the account given of the Coolies does not lead me to suppose they are of the Oraon family. There is, however, a short description of what appears to be a remnant of a tribe, which would answer perfectly for the Oraons,—"A small, active, well-built race, engaged to some extent in cultivation, but by choice deriving their subsistence, as far as possible, from the chase, fishing, or the collecting of wild fruits and the marketable produce of the jungles for sale. Their peculiar pursuits, little relished or shared in by the rest of the community, caused them to be viewed with dislike and dread, and the reputation of possessing great powers in sorcery subjects them to much cruel treatment."

Every word of the above description applies to the Oraon tribe, and the name given to this remnant of a people, viz., "Dunjas," is an Oraon word not unlike the term Dhangurh, so commonly applied to the Oraons in the countries to which they emigrate for work.

The names traditionally handed down amongst the Oraons, as Loorik Sowrik, allude probably to some tribe of Sravacks or Sowoks or Jains, and the Palipipri might refer to the Palithana mountains, the Jain temples on which are amongst the most interesting architectural works in India. The etymology of the word Oraon, I have not been able to trace satisfactorily, but it may have been applied to the tribe in consequence of their migratory habits. They call themselves "Khoonkir."

Between the language of the Oraons and the language of the Moondahs and their cognates, I can trace no similarity either in pronunciation, formation, construction, or general character. With pretty copious vocabularies before me, I can find no analogues, and, whilst the language of the Moondahs is soft and sonorous, that of the Oraons is guttural and harsh. Dr. Latham, in his descriptive ethnology, has noticed the near connection of the Oraon, Rájmahal hill, and Tamul languages, and especially observes on the similarity of the personal pronouns.

English.	*Rajmahal.*	*Oraon.*	*Tamul, etc.*
I	En	En	Nam, En
Thou	Nin	Nin	Nin
He, she, it	Ath	As	Ata
We	Nim	Em	Nam
Ye	Nina	Nim	Nim
They	Awar	Ar	Awar

Out of a vocabulary of about twenty-four Oraon and Tamul words, I find the following analogues.

English.	*Tamul.*	*Tuda.*	*Oraon.*
Man	Al	Al	Al
Eye	Kam	Kan	Khan
Tooth	Pal	Paroh	Pulla

But I find in the language now spoken by the Oraons, words of Sanscrit origin not in common use, as "*pupl,*" flower, "*amb,*" water, "*kesh,*" hair, indicative of their having occupied some country in common with people speaking a Sanscrit or Prakrit dialect.

Their physical peculiarities are as different from those of the Moondah as are their linguistic characteristics. The Oraons must be regarded as a very small race, not short and squat like some of the Indo-Chinese stock, but a well-proportioned small race. The young men and women have light graceful figures, and are as active as monkeys. Their complexions are, as a rule, of the darkest; but if we take as our type those who dwell in mixed communities, we find great variety in feature and colour. If we take those who, living in isolated positions, may be supposed to offer us the purest blood, we find them generally dark and ill-favoured. They have wide mouths, thick lips and projecting maxillary processes, nostrils wide apart, and no elevation of nose to speak of, and low though not in general very receding foreheads. I have seen amongst them heads that in the woolly crispness of the hair completed the similitude of the Oraons to the Negro. It may be said that the class I am describing have degenerated in feature from living a wilder and more savage life than others of their clan; but I do not find this degeneracy of feature amongst the Jushpore Korewahs, who are to the Moondahs of Chota-Nagpore what the Jushpore Oraons are to the Oraons of the same district.* I found the Korewahs mostly short of stature, but with well knit muscular frames, complexion brown not black, sharp bright deep set eyes, noses not deficient in prominency, somewhat high cheek bones, but without notable maxillary protuberances. In the more civilised parts of the province, both Oraons and Moondahs improve in appearance. The former indeed still retain their somewhat diminutive appearance, but in complexion they are fairer, in features softer, some even good looking, and the youthful amongst them all pleasing from their usual happy contented expression and imperturbable good humour.

Driven from the Rhotas hills, the Oraons, according to their own tradition, separated into two great divisions. One of

* Asiatic Society's Journal, vol. xxxiv, p. 15.

these, moving east, found a final resting place in the Rájmahal hills; the other, going south, sought refuge in the Palamow hills, and wandered from valley to valley in those ranges, till they found themselves in Burway, a hill-locked estate in Chota-Nagpore proper. From thence they occupied the highlands of Jushpore and formed the settlements in the vicinity of Lohardugga, on the Chota-Nagpore plateau, where they still constitute the bulk of the population. The Satyomba Moondahs had not effected settlements so far to the west.

The identity of the language spoken by the Rájmahal hill people (not the Sonthals) and that of the Oraons is full and sufficient confirmation of the tradition of their common origin, and of the division of the tribe spoken of above; but a comparison of the customs of the Rájmahal hill people, who being isolated must have retained those they brought with them to the hills, with the customs of the Oraons, demonstrates that the latter are derived from the Moondahs.

Referring to Col. Walter Sherwill's account of the Rájmahal hill people,* I find, in regard to marriage, that it is customary for the young couple to sleep together on the same bed before marriage. The Oraons would consider this a very indecorous proceeding, though a public recognition that the young couple have slept together after the marriage is with the Oraons an important sequel to the ceremony. In the Rájmahal hills, says Col. Sherwill, the dead are buried. The Rig Veda and Ramayan tell us that this was the custom of the Dusyas, but the Moondahs and their cognates all burn their dead, and the Oraons follow their example.

The Rájmahal hill men swear on salt, the Oraons have a veneration for salt, but swear on *dub* grass,† *huldee,* and rice. The Oraons know nothing of Bedo Gosain, the invisible spirit adored by the Rájmahalies. Their supreme deity is the sun, under the title of Dhurmo, but as that and the Rájmahalee term are both of Sanscrit origin, it evinces that neither race have in their own language any word for the Deity.

Lastly, the hill man is described as less cheerful than the Sonthal, less industrious, and as not joining in the dances that the people of the Moondah stock are so devoted to. In Chota-Nagpore the Oraons are more lively than the Moondahs, quite as industrious, and the most enthusiastic and nimble-footed of the dancers.

The two races, Moondah and Oraon, must have been for ages the only colonists of the plateau; it is singular that they have no tradition of any dispute having arisen between them.

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* Asiatic Society's Journal, vol. xx, p. 544. † Agrostis linearis.

Affecting jealously to guard against admixture of the races by sexual intercourse, they in other respects lived as one people, the Oraon conforming more to the customs of the Moondah than the Moondahs to those of the Oraon, and in many instances adopting the Moondah language and losing their own.

In villages east of Ranchee, though inhabited wholly by Oraons, the Moondah, not Oraon, is the language spoken; but the Moondah language is not much known in the vicinity of Lohardaggah or in Jushpore.

The village systems of the two people became almost identical in form. The village priest, called the Pahan, is probably an Oraon institution, as, I think, amongst the Moondahs the principle is that the head of the family is priest; but the Moondahs of Chota-Nagpore adopted it, and in their villages, as well as in those of the Oraons, there is always a Pahan. The village system now existing is such as it became after many encroachments by the Rajah and the middlemen introduced by him. Still, as bearing the impress of a very primitive form of government, it is worth describing, and in doing so, I shall make use of a very elaborate report on the subject written by Doctor Davidson in 1839.

The actual descendants of the men who formed the villages are called Bhuinhurs. They are a privileged class, who hold their lands at low fixed rates or rent-free, but they are bound to do service to the chief or his representative. The head of the Bhuinhurs is called the Moondah, and is generally the representative of the old Moondah chief of the village. He presides when meetings are held to settle disputes about social customs; and all demands for service on the Bhuinhurs by the proprietor or farmer are made through him. He holds his lands as Bhuinhurree, and has no other emolument.

The Mahto, though second in point of rank, is the most important functionary in the village. He has the assessment and settlement of all lands not held by the hereditary cultivators; collects all dues and rents, and is responsible for them to the farmer or proprietor. He holds for his services one *powa* of land rent-free, and in some villages gets a fee of one or two pice annually from each ryot. The office is not hereditary.

The Pahan is the village priest. He is a Moondah or Oraon by caste, but all observances for propitiating the village gods or devils are performed by him. No Brahmins are permitted to interfere. The office of Pahan is generally hereditary, but is not necessarily so. The Pahan has under his charge the land called "Dalikhatari," and from the proceeds of this land he has to support himself and to provide the rice and rice-beer required for the great festivals.

The Bhandari assists in the collection of rents, summoning ryots who have to do work, or whose attendance is required by the Zemindar or farmer, and in looking after the collections made in kind. He has an allowance of one *powa* of land, and gets from each ryot one *kerai* or bundle of each crop as it is cut.

There is a Gorait for each village, and a Kotewar for one or more villages. The former is the messenger of the zemindar or his representative, the latter is the police officer.

The villagers maintain a blacksmith and a gowala or herd: the latter takes care of all the village cattle, and is supposed to be responsible if any are stolen. They each get a maund of dhan for every plough, and three *kerais*, bundles, of other crops.

According to the tradition of the Kols, the rajah is entitled to the rent of only half of the land in each village. The remainder is bhuinhurree, or rent-free under some other denomination, but in most villages rent is now taken on from two-thirds to three-fourths of the land. The land is thus divided:—

I. Rughus—the land that pays rent to the owner or his representative.

II. Bhetketta, a certain portion of the rughus which each ryot, not a bhuinhur, is allowed to cultivate free of rent, but for which he has to perform various services to the landlord or farmer.

III. The land allotted to the Mahto, the Pahan, and the Bhundari.

IV. Munghus—the land at the disposal of the landlord or his agent, or the farmer of the village. For the cultivation of this land, the holder of the village can make any arrangement that he pleases.

V. Bhuinhurree is the land held rent free by the descendants of the founder of the village, who are, however, bound to render certain services to the rajah or his representative.

VI. Bhootketta—the land, the produce of which is appropriated to the expense of the great village poojas and festivals; a portion of this called "dalikhatari" is assigned to the pahan for the ordinary annual poojas, and the proceeds of the remainder are reserved for the triennial sacrifices and extraordinary occasions.

The rent is assessed on the irrigated land only. The cultivator is entitled to upland in proportion to the wet land for which he pays. If he cultivates more, the custom is for a payment in kind, called muswur, to be made when the crop is harvested.

The Bhuinhurs cling most tenaciously to their bhuinhurree lands. Insurrections have followed attempts to disturb these

tenures, and even now such attempts are sure to lead to serious affrays. The Kol insurrection of 1833 was, without doubt, mainly caused by the encroachments of alien farmers and sub-proprietors on the rights of the descendants of the old settlers. The first burst of the outbreak was a pretty broad hint, a general conflagration of the houses of alien farmers, and sub-proprietors, and the massacre of all that the incensed Kols could find.

The Kols of Chota-Nagpore, generally a good-tempered, mild, inoffensive race, become wild with excitement on this question, and nothing can reconcile them to a decree or order which in any way infringes on what they consider their proprietary right. According to their theory, dispossession for generations can no more annul their right in the land than it can extinguish the ties of blood. The courts will not always accept this doctrine, and the Kols cannot regard as equitable any decision that excludes it.

An Oraon family lives very promiscuously in a small, indifferently constructed and untidy looking hut, and their village often consists of a street or court of such huts. In all that relates to their inner domestic life, they are less susceptible of improvement than the other tribes. They have no gardens or orchards attached to individual houses, but the groves of fruit-trees that they plant outside the village form a beautiful feature in the scenery of Chota-Nagpore, and they have generally, in and about the village, some fine trees which are common property. In every Oraon village of old standing there is a house called the "doomcooreea" (bachelor's hall), in which all unmarried men and boys of the tribe are obliged to sleep. Any one absenting himself and spending the night elsewhere in the village is fined. In this building the flags, musical instruments, yaks' tails, dancing equipments, and other property used at the festivals are kept. They have a regular system of fagging in the doomcooreea. The small boys have to shampoo the limbs of their luxurious masters, and obey all orders of the elders, who also systematically bully them to make them, it is alleged, hardy. In some villages the unmarried girls have a house to themselves, an old woman being appointed as duenna to look after them. She is always armed with a stick to keep the boys off. A circular space in front of the doomcooreea is kept clear as the village dancing ground. It is generally sheltered by fine old trees, and seats are placed all round for spectators or tired dancers.

The doomcooreea is never used by boys of the Moondah tribe. It is an institution quite unknown to the Hos, but the Moondahs and Hos build themselves houses in which all the family

can be decently accommodated. Their houses are more isolated, occupy much more space and are in appearance much more civilised than those of the Oraons, with verandahs, well raised plinths and separate apartments for the married and single members of the famlly. Every Moondah village has its dancing place, though it has no doomcooreea. The best Korewah villages consist of about forty houses built round a large square, in the centre of which is the dancing arena; but as the Korewahs are nomads, changing their abodes every second or third year, their villages may be regarded as mere standing camps. The Kheriahs build substantial comfortable houses like the Hos. It is curious they have the same word "O" for a house and the sky. The Moondah word "ora" is, like the Turkoman "ova," a house or tent. The flags kept in the Oraon doomcooreea appear to be an Oraon institution. Every village or group of villages, probably the head quarters of each "parha," has its peculiar flag, and we have actually had cases in courts praying for injunction against villages charged with having assumed flags that did not belong to them!

I will now proceed to review the customs of the Moondahs and Oraons together, taking care to note all points of divergence that are known to me.

After the birth of a child, the mother has to undergo purification, and on the same day that this ceremony takes place, which is simply a process of ablution, the child is named. Elderly females or matrons, friends and relations, assemble for this purpose, and a vessel containing water is placed in the midst, and, as the name first selected is pronounced, one of the women drops a grain of rice into the water. If the grain of rice sinks, that name is discarded, and the experiment is repeated with the second name on the list, and so on till, as the name is pronounced, the grain floats. (The Garrows of the eastern frontier have a similar method for divining the name of the spirit they ought to invoke on particular occasions.) If the name of some friend is chosen, it is considered as establishing a tie between the child and his namesake, resembling that which subsists between a Christian child and his godfather. The person whose name is selected is always called Saki or Sakhi, a word of Sanscrit origin meaning friend, so that in "nam Saki" we have in meaning and sound our word namesake. The following are some names of girls, Jambi, Jima, Jingi, Turki, Sulgi,* Pongla, Madhi, Makoo, Roomeea Saggi, Dinli, Natri, Akli, Bangi, Julli, and the Hindoo names of the

* A common name, and also the name of a goddess; and the name, I see, of one of the young ladies from the Andaman islands.

days of the week are very commonly given. The following are the names of boys—Rumsi, Birsa, Somra, Daharoo, Singra, Satri, Dubroo, Doolko, Didoo, Runka, Biggoo. But they have adopted many foreign names, and the names of British officers they have known and esteemed are thus preserved amongst the Hos of Singbhoom, and may be handed down from generation to generation. Thus "Major" and "Captain" have become common names in the Colehan, originally taken from Major Roughsedge, the first British officer they ever saw, and Captain Wilkinson (now Colonel Wilkinson), whom they regarded as their greatest benefactor. Doctor, Tickell, &c., are also common. Girls, when three or four years of age, receive their mark of caste: three lines tattooed on the forehead and two on each temple, four dots on the chin and one on the nose. It does not appear to be connected with any religious custom, nor is it applied with any ceremony; and as neither the Moondahs nor the Oraons have any particular term for it in their own language, it is probable that they adopted it from the Sudhs or Hindoos. Some Moondah girls of Chota-Nagpore have different marks. Those of Singbhoom have adopted the arrow, appropriately enough, as the national weapon of their lords and masters.

The Kheriahs and Juangas, though isolated from the Moondahs and Oraons, have the same triple and double marks on the forehead and temples. The Oraon boys are marked, when children, on the arms by rather a severe process of puncturation, which they consider it manly to endure. The only reason I have heard assigned for this custom is, that through it even the naked dead may have a distinguishing mark.

When a girl approaches maturity, it is incumbent on her to bind up her hair, and from that period of her life she is restricted to food prepared by her own people. As a child with her hair loose, she is permitted to partake of whatever is edible, no matter by whom prepared. Young men enjoy this liberty of appetite till they marry. They then, to use their own expression, put salt in their flesh, and must not partake of food prepared by aliens. The Oraons have a veneration for salt, and they are not absolutely prohibited from partaking of plain rice cooked by others, provided they are left to salt it themselves. The salt, it would appear, thus applied, removes the "taboo," and makes *fas* what is otherwise *nefas*.

As a rule, marriages are not contracted till both the bride and bridegroom are of mature age. It is sometimes left to the parents to select wives for their sons; but the young people have ample opportunities for studying each other's characters, love-making, and following the bent of their own inclinations;

and it very often happens that plans concocted by the parents are frustrated by the children.

In Chota-Nagpore, amongst the agricultural classes, and in Singbhoom amongst all classes of Kols, the girls have all a price fixed upon them, and this the lover or his friends must arrange to pay, before the parents of the bride will give their consent. In Singbhoom, the price is so high, especially for young ladies of good family, that marriage is frequently put off till late in life; and girls valued not so much for their charms and accomplishments as for their pedigree, often grow grey as maidens in the house of their fathers. Singbhoom is perhaps the only place in India in which old maids are found; they have plenty of them there. But though urged to change this practice by all who take an interest in them, the old Mankees of Singbhoom are inflexible, not only in demanding a high price for their girls, but in insisting that it shall be paid, according to ancient custom, chiefly in cattle. A Mankee of the old school will not take less than forty head of cattle for his daughter; but the eyes of the rising generation are opened to the absurdity of the practice, and some of us may live to see it changed.

In consequence of this custom, the grown-up boys and girls are quite a separate institution in every Kol village; there is very little restraint on their intercourse, they form a very pleasant society of their own, from which the old people sensibly keep aloof. If a flirtation is known to have gone too far, the matter is generally settled by the young man being made to pay the price for the girl and marry her.

In Chota-Nagpore the daughter of a Mankee was, some years ago, valued at about 36 Rs.; but they are gradually adopting the custom of the Hindoos in regard to their marriages, and giving up the objectionable practice of putting a price on them. The price paid by the common people ranges from 10 to 12 rupees. These disagreeable preliminaries having been arranged, the bridegroom and a large party of his friends of both sexes enter with much singing and dancing and sham fighting in the village of the bride, where they meet the bride's party and are hospitably entertained.

The bride and bridegroom are now well anointed with turmeric, and bathed, and then taken and wedded, not to each other, but to two trees! The bride to a mowa tree, the bridegroom to a mango. They are made to touch the tree with "*seendoor*," (red lead), and then to clasp it in their arms. On returning, they are placed standing face to face, the girl on a curry stone over a ploughshare supported on sheaves of corn or grass. The bridegroom stands ungallantly treading on his

bride's toes, and in this position touches her forehead with the red lead; she touches his forehead in the same manner. The bridesmaids then, after some preliminary splashing and sprinkling, pour a jar of water over the head of each: this necessitates a change of raiment, and apparently concludes the ceremony, as the young couple going inside to change, do not appear again till the cock-crowing announces the dawn or its approach. At the first crow the bridesmaids, who with the young men have been merrily keeping it up all night with the song and dance, burst into the nuptial chamber and bring forth the blushing bride and her bashful lord; and then they all go down to the river or to a tank to bathe, and parties of boys and girls form sides under the leadership of the bride and bridegroom, and pelt each other with clods of earth. The bridegroom next takes a water vessel and conceals it in the stream or water for the bride to find. She then conceals it from him, and when he has found it, she takes it up filled with water and places it on her head. She lifts her arm to support the pitcher, and the bridegroom, standing behind her with his bow strung, and the hand that grasps it lightly resting on her shoulder, discharges an arrow from the pretty loophole thus formed into the path before her. The girl walks on to where the arrow falls, and with head erect and still bearing the pitcher of water, she picks it up with her foot, takes it into her hand, and restores it to her husband with a graceful obeisance. She thus shows that she can adroitly perform her domestic duties and knows her duty to her lord and master, whilst he, on his part, in discharging an arrow to clear her path of an imaginary foe, indicates that he is prepared to perform his duty as her guide and protector through life.

In the Oraon marriages, many of these symbolical ceremonies are omitted, and the important one of exchanging the "*sindoor*" is differently performed. The bridegroom stands behind his bride with his toes on her heels, and stretches over her head to touch her forehead with the powder. She touches his forehead by reaching back over his shoulder. The cold bath completes the ceremony, they go to their own apartment to change their clothes, and do not emerge till morning.

The price paid for a girl in cows is called "*sukmur*" by the Kheriah tribe. They have no word for marriage in their own language, and the only ceremony used appears to be little more than a sort of public recognition of the cohabitation. They have learned to call this "*biha,*" but they admitted to me that this public recognition was often dispensed with.

It takes place in this wise. After the settlement of the usual preliminaries, the bride is brought to the village of her intended

bridegroom by her own people and their friends, and they halt and bivouac in the village grove. The bridegroom and his friends join them in the grove, where they all regale themselves and dance, and during these nuptial dances the bride and bridegroom are each borne on the hips of one of their dancing friends; they are not allowed to put their feet to the ground. Thus wildly dancing, they proceed into the village, and the bride and bridegroom are taken to the latter's house and anointed with oil; they are then brought outside, and the ceremony of touching each other's forehead with the "*sindoor*" is performed, followed by the splashing and sousing, which becomes a general romp. Then the young couple are left to themselves till morning. The bridesmaids arouse them as the cock crows, and, after the public ablution of garments and their wearers, the party breaks up.

The gestures of the dancers on these occasions, and the songs, all bear more directly than delicately on what is evidently considered as the main object of the festivities.

In Singbhoom, marriages, notwithstanding the lateness at which they take place, are generally arranged by the parents, but their wishes are not unfrequently anticipated by love matches. In the various journeyings to and fro that are found necessary when a match is being arranged, omens are carefully observed, and the match is broken off if they are unfavourable. At the actual marriage there is much feasting and dancing, but little ceremony. The turning point of the affair is, when the bride and bridegroom mix and drink off some of the beer they have each been helped to; the boy pours some of the beer given to him into the girl's cup, she pours from her cup into the boy's cup, and they drink and thus become of the same "*keeli*" or clan, for the Hos, Moondahs, and Oraons are all divided into families under this name, and may not take to wife a girl of their own *keeli.*

This division of the primitive races into something having a semblance to caste, will be found in the north-eastern frontier as well as in this province. The Garrows, for instance, are divided into what are called "maharis," and a man may not marry a girl of his own mahari.

It is obvious that the custom does not spring from any such notions of caste as are found amongst the Hindoos, and that it is not one which these races have adopted from the Hindoos, because with a Hindoo, caste is destroyed by a marriage *out* of it. It is equally opposed to the custom of the Jews, whose daughters (at least if heiresses) were obliged to take husbands of their own tribe.*

* Numbers xxxvi, 6.

In Singbhoom the bride and bridegroom do not touch each other with "*sindoor*," as is the custom in Chota-Nagpore. The Oraons and Moondahs may have adopted the custom from the Hindoos, and the primitive practice of the race is probably as it is found amongst the more isolated Hos.

A very singular scene may sometimes be noticed in the markets of Singbhoom. A young man suddenly makes a pounce on a girl and carries her off bodily, his friends covering the retreat (like a group from the picture of the rape of the Sabines). This is generally a summary method of surmounting the obstacles that cruel parents may have placed in the lovers' path; but though it is sometimes done in anticipation of the favourable inclination of the girl herself, and in spite of her struggles and tears, no disinterested person interferes, and the girls, late companions of the abducted maiden, often applaud the exploit.

The Ho husband has to pay a high price for his wife, and it is certain that he highly appreciates her. Although he is not known to have for her any more endearing epithet than "my old woman," yet by no civilised race are wives treated with more consideration than by the untutored Ho. The whole of the domestic arrangements are under her exclusive management. She is consulted on all occasions, and I know one or two husbands whom I am almost inclined to regard as henpecked. The Kols seldom take a second wife during the lifetime of the first, but I know instances of their having done so. The wife always cooks for her husband, and when the dinner is ready, they sit down and eat it together like Christians; but the Oraons have followed the Hindoo custom of making the woman eat the leavings of her lord.

It is customary with all these tribes to pay particular attention to omens, when any of them set out to arrange the preliminaries of a marriage. The Hos, who are more under the influence of this superstition than their cognates or than the Oraons, have a long list of deterrent signs, which have been described by Tickell in his paper above quoted. I subjoin the most noticeable of those that are observed by the Oraons.

I. On leaving the house "to win a bride," they look out for omens. If a cow calls and the calf responds, it is good. If there is no response, the wooing is postponed or abandoned.

II. If they find a dead mouse on the road, they must stop and make a diagnosis. If ants and flies have possessed themselves of the carcass, it is good, they go on. If the insects appear to have shunned it (which is not very likely to happen), they go back.

III. It is not good to meet oxen or buffaloes with their horns

crossed, or to see a hawk strike a bird, or to come upon women washing clothes. It is good to see people burying a dead body, and to find on their road a cow giving milk to her calf.

IV. If they see a man cutting a tree, and the tree falls before they can get past it, it is very bad. If they pass before it falls, it is all right. A certain bird heard on the left gives a note of joy; if heard on the right, he is a harbinger of woe.

V. If, on approaching the village of the girl, they come on women with water-pots full, it is a happy omen. If they meet a party with empty water-pots, it is a bad one.

The Nagpore Kols, whether of the Moondah or Oraon tribe, and all the cognates of the Moondahs that I know of, are passionately fond of dancing, and with them dancing is as much an accomplishment as it is with the civilised nations of Europe. They have a great variety of dances, and in each different steps and figures are used, of great intricacy, but they are performed with a neatness and precision that can only be acquired by great practice. Little children are hardly on their legs before they begin to learn their dancing steps; and the result of this early training is that, however difficult the step, the limbs of the performers move as if they belonged to one body. They have musical voices and a great variety of simple melodies. It is a fact that, when we raised a corps of Kols, their early practice in keeping step and time greatly facilitated the operations of drill; and the missionaries have availed themselves of the musical talents and taste of the Kol converts to produce congregational singing that would be a credit to an English country church.

The dances are seen to the greatest advantage at the great periodical festivals called "jatras." They are at appointed places and seasons, and, when the day comes, all take a holiday and proceed to the spot in their best array. The girls on these occasions put on their best dress, generally a white "*saree*," with a broad red border. They tastefully arrange flowers in their hair and plumes of the long breast feathers of the paddy-bird. The young men wear Turkey red turbans, and add a snow white cloth to their usually scanty garb, and also adorn themselves with flowers and peacock's feathers. As parties from the different villages come near the trysting place, they may be observed finishing their toilettes in the open fields; when all is ready, the groups form, and their approach from different sides, with their banners and yak's tails waving, horns and symbols sounding, marshalled into alternate ranks of lads and lasses all keeping perfect step and dress, with the gay head-dresses of the girls and the numerous brass ornaments of the boys glittering in the sun, forms a very lively and pleasing pic-

ture. They enter the grove where the meeting is held in jaunty dashing style, wheeling and countermarching and forming lines, circles, and columns with grace and precision. The dance with these movements is called "khurriah," and they are held in all months of the year, a series of them following each other at short intervals at different places all over the country, and the attendance, at some that I have seen, could not be under 5,000 people, all enjoying themselves.

When they enter the grove, the different groups join and dance the khurriah together, forming one vast dancing procession. Then each takes its own place and plants its flag and dances round it till near sunset, when all go dancing home. This is followed by a carouse in the village, after which the dance is often continued at the "*akrah*" all night.

At each of these "jattras," a kind of fair is held, and fairings and refreshments are to be had in abundance. The young men can treat their partners with sweetmeats, and do so. As already observed, there is a place in every village called "*akrah*" set apart for dancing and ceremonies. This is a circular arena with a post in the centre, and around it are benches for the spectators or for the dancers when wearied, the whole being generally shaded by fine old tamarind, the most beautiful of village trees.

The season dances in the village open with the *kurrum* in July, at the commencement of the planting season. There is a movement in this dance called "*hojar*," when the girls suddenly kneel and pat the ground in time to the music, as if caressing and coaxing it to be productive. On the day appointed for the ceremony, the boys and girls go in procession to the *kurrum* tree, cut and bring back to the village some branches, which are planted in the *akrah*. An old man with a liberal allowance of beer is placed to watch these, whilst the young people refresh themselves. They all, old and young, then assemble in the *akrah*, and one of the elders harangues them, and after giving them much good advice, concludes by directing them to commence the dance. The songs sung on this occasion are in Hindee, and contain allusions to the flooded state of the rivers and fields. They also sing an ode to the Satyomba rajah. The *kurrum* is kept by the Soodh or Hindoo population as well as by the Kols.

After harvest of the earlier crop of the planted rice, in November, the "*matha*" is danced by the boys and girls in the village. The girls, moving in a semicircle and clasping each other's hands, dance with a very lively step and bowing motion of the body to the men who sing and play to them. The girls have another dance at this season called "*angua*," because it is

danced in front of the house instead of the *akrah;* to this and to a feast held on the occasion the young men are not invited.

The "jadoor" dances commence on the completion of the great harvest of the rice crop, and continue till the commencement of the hot season. This is one of the most characteristic dances, from the peculiar way in which the arms are interwoven and clasped behind the back of the performers.

Then comes the "sarhool," at the close of the month of Phalgoon, or early in March. The sarhool is the flower of the saul tree, which now blossoms. The boys and girls make garlands of these flowers, weave them in their hair and decorate their houses with them. The dance on this occasion, called the "Baihini," is a very frisky one. The boys and girls dance to each other, clasping hands and pirouetting, so as to cause "*dos-à-dos*" concussions which appear to constitute the best part of the fun. Yet the subject of the song sung at the Sarhool feast is a sad one. A girl who had married out of the village is supposed to return to it in affliction, and to sit weeping at one side of the house, whilst her former associates are revelling at the other. The songs are in the Moondah language.

They have besides different dances for weddings, and a dance called "jumhir" which is suited to any occasion. The dances above briefly noticed are all more or less connected with some religious ceremony, but this is left to the elders. The young people seem to me to take little interest in that part of the festival, which is, in proportion to the dancing, in importance like the bread to Falstaff's sack. They are always ready for a dance, and night after night in some villages the *akrah* drums collect the youths and maidens after the evening meal, and if you go quietly to the scene, as I have done, you may find that, whilst some are dancing, others are flirting in the most demonstrative manner, seated in detached couples on the benches or on the roots of the great trees, with arms round each others' waists, looking lovingly into each others' faces.

Next to dancing, that which most engrosses the mind of the Kol is the belief in and fear of witchcraft. All disease in men and in cattle is attributed to one or two causes, the wrath of some evil spirit who has to be appeased, or the spell of some witch or sorcerer who should be destroyed. The fear of punishment and, I may add for some of them, the respect they bear to the orders of their rulers, restrain their hands, and witch murders are now very rare, but a village is soon made too hot to hold one who is supposed to be a witch.

When a belief is entertained that sickness in a family, or mortality amongst cattle, or other misfortune, has been brought

about by sorcery, a sokha or witch-finder is employed to find out who has cast the spell. By the sokhas various methods of divination are employed. One of the most common is the test by the stone and "*poila.*" The latter is a large wooden cup shaped like a half cocoanut, used as a measure for grain. It is placed under a flat stone, and becomes a pivot for the stone to turn on. A boy is then placed in a sitting position on the stone, supporting himself by his hands, and the names of all the people in the neighbourhood are slowly pronounced, and as each name is uttered, a few grains of rice are thrown at the boy; when they come to the name of the witch or wizard, the stone turns and the boy rolls off!

There is no necessary collusion between the sokha and the boy; the motion of the hand throwing the rice produces *coma*, and the sokha is, I suppose, sufficiently a mesmerist to bring about the required result when he pleases.

The Singbhoom Kols or Hos, left to themselves, not only considered it necessary to put to death a witch thus denounced, but if she had children or other blood relations, they must all perish, as all of the same blood were supposed to be tainted.

In 1857, when, in consequence of the mutinies, Singbhoom was temporarily without officers, the Ho tribes of the southern parts of the district, always the most turbulent, released from a restraint they had never been very patient under, set to work to search out the witches and sorcerers who, it was supposed, from the long spell of protection they had enjoyed, had increased and multiplied to a dangerous extent. In a report on this subject from the district officer, in 1860, it is stated that "the destruction of human life that ensued is too terrible to contemplate; whole families were put an end to. In some instances the destroyers, issuing forth in the dusk and commencing with the denounced wizard and his household, went from house to house, until before the morning dawn they had succeeded in extinguishing, as they supposed, the whole race." On the suppression of the disturbances, the return of the refractory Hos to order was as sudden and decisive as had been their relapse into barbarism. The survivors of the families who had suffered at once emerged with confidence from their hiding-places, and of the cases of witchcraft-murder, thus or otherwise brought to notice, the perpetrators were in almost every instance prosecuted to conviction.

It was melancholy to have to condemn men who themselves artlessly detailed every incident of the crime with which they were charged. The work of retribution was a sad task, but it was rigorously carried out, and we have not since then had a single case of witchcraft murder in the Colehan. That the be-

lief in the existence of witches and sorcerers is consequently extirpated, cannot be hoped. Nothing but their conversion from paganism could effect this. I am convinced that in most instances the prisoners, who in their examinations detailed the most marvellous effects of imputed sorcery, were sincere believers in all that they narrated.

One of them, named Mora, saw his wife killed by a tiger, which he followed till it led him to the house of a man named Poosa, whom he knew. He told Poosa's relations what had occurred, declaring to them that Poosa had, in the form of a tiger, killed and eaten his wife. The relatives appealed to, did not for a moment discredit the charge. They said they were aware that Poosa did possess the imputed power of metamorphosis. They brought him out and, delivering him bound to his accuser, stood by whilst Mora deliberately put him to death.

In explanation of their having so acted, they deposed that Poosa had one night devoured an entire goat and roared like a tiger, whilst he was eating it; and on another occasion he informed his friends he had a longing to eat a particular bullock, and that very night that very bullock was killed and devoured by a tiger!

From their having lived so long together, it is not surprising that we should find the religious ceremonies of the Oraon and Moondah almost identical. The Oraons have adopted the religion of the Moondah, but they retain some features of their original faith, which indicate that it was in many essential points different from that to which they have conformed.

I have already observed that the pahan or village priest is in all probability an Oraon institution. The Rajmahali have a similar functionary called "demam," who foretells events, offers sacrifices, regulates feasts, and exorcises devils. In the Ho and Moondah villages, all priestly functions may be performed by the head of the family, or, if the occasion be one in which the village generally is concerned, by any elder of the requisite knowledge and experience. They worship the sun, "Singbonga," as the supreme being, the creator, the preserver; and a number of secondary gods, invisible; material idol worship they have none. The paganism of the Ho and Moondah in all essential features is shamanistic.

The Oraons, in addition to the Pahan, whose business it is to offer sacrifices for the benefit of the community, have recourse to a person called "Ojha" whom they consult regarding the proper spirit to be invoked and the nature of the sacrifice that is required of them, and whose functions appear to me to bear a strong resemblance to those of the medicine man of the

African tribes. The Oraons have wooden images or stones to represent the village and domestic spirits they worship. Thus a carved post in the centre of their dancing arena represents the tutelary deity of the village, "Daroo;" and they have objects of some kind to represent their domestic gods, *penates.*

They never build a house, or select a new site for a village or even a new threshing-floor, without consulting the ojha and omens. When a new house is ready for the reception of its owners, an ojha is called, and he takes earth from the hearth and charcoal, and, mixing them together, marks on the floor a magic circle. In the centre of this he places an egg, and on the egg a split twig of the Bel tree. The egg is then roasted and eaten by the people who are to occupy the house. This is followed by a great feast and dancing—a regular house-warming: on the top of the house an image of a fish is hung to avert the evil eye. These peculiarities in the paganism of the Oraon, and only practised by Moondahs who live in the same village with them, appear to me to savour thoroughly of feticism. Before affirming this positively, it would be advisable to examine more minutely the customs of the Rajmahal hill tribes; but the elephant gods, depicted by W. Sherwill as seen in their villages, are very fetish in appearance.*

The Moondahs, without applying to an ojha or medicine-man, consult auguries in choosing the site of a house, with prayer to Singbonga. A small quantity of rice is placed in holes made at the four corners of the selected site, where it is left all night, and if found undisturbed in the morning, the site is good. The same process is gone through in selecting a new site for a village. Prayer is offered to Singbonga twice,—first, that the test applied may truly indicate if the site be good or bad; secondly, for a blessing on the chosen site.

It is the fashion to call the religion of the Kols 'devil worship,' but this is not strictly correct; for although the minor deities may be mostly of a malevolent nature, and therefore devils who have to be propitiated, still Singbonga is worshipped as a beneficent god. This worship of the sun as the supreme deity is the foundation of the religion of the Oraons as well as of the Moondahs. By the former he is invoked as Dhurmi, the holy one. He is the creator and the preserver, and with reference to his purity, white animals are offered to him by his votaries. He is not regarded as the author of sickness or calamity; but he may be appealed to to avert it, and this appeal is often made, when the sacrifices to the minor deities have been unproductive.

* Vide Journal Asiatic Society, Bengal, No. vii, 1851, p. 553.

But, besides these occasional sacrifices, all Moondahs who hold to the faith of their ancestors, are especially bound to make a certain number of offerings to Singbonga during their tenure of the position of head of the family. He may take his own time about them, but he will not be happy in his mind till he completes his complement and clears the account. I obtained this information from the Kheriahs, and on speaking about it to some ancient Pahans and Moondah elders, was told that it undoubtedly is the orthodox practice, but it has been neglected. The sacrifices are five in number: first, fowls; second, a pig; third, a white goat; fourth, a ram; fifth, a buffalo; and they must be offered in the open plain in front of an ant hill, or with an ant hill as an altar. Sacrifices to other gods are generally offered in the "Saerna,"* the sacred grove of Sal trees, the remnant of the primeval forest left for the spirits when the settlement was first made.

The names and attributes of the inferior deities are nearly the same amongst the Hos in Singbhoom, the Moondahs and Oraons in Chota-Nagpore, and amongst the Sonthals *passim.* Marang Booroo and Pongla his wife; Desaoolli, Jaer Boori, Eekin Bonga, Boora Bonga, Charee Desoolli and Dara are invoked in Chota-Nagpore.

The Sonthals have Marang Booroo, also Maniko his brother and Jaer his sister. According to Tickell's account of the Singbhoom gods and their attributes, they too have Marang Booroo and Pongala, Desaoolli and Jaer Boori or Jaer Era, and others. In cases of sickness the Ho, after ascertaining by augury which of the gods should be propitiated, will go on offering sacrifices till the patient recovers, or his live stock is entirely exhausted.

Next to Singbonga, I am inclined to place the deity that is adored as "Marang Booroo." Booroo means mountain, but every mountain has its spirit, and the word is therefore used to mean god or spirit† also. Marang Booroo is the great spirit or great mountain. Not far from the village of Lodmah in Chota-Nagpore, one of the most conspicuous hills on the plateau is called Marang Booroo, and here the great spirit is supposed to dwell. It is worshipped by the Sonthals, the Bhoomij, the Hos, the Moondahs, and the Oraons. The two latter make pilgrimages to it. The Hos have some vague notion of its situation; the more distant members of the family canonise some hill more conveniently situated.

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* Or 'Saran', 'Charan'.

† Thus they have for their altars groves and high places, like the idolatrous Jews.

The Marang Booroo is especially venerated as the lord of rain. Before the rains the women go to the top of the hill, under the leadership of the wives of the Pahans, with drums, which are on this occasion only played on by young ladies, and with offerings of milk and leaves of the Bel tree. On the top of the hill there is a flat mass of rock on which they deposit their offerings.

The wives of the Pahans now kneel down, and with hair loosened invoke the deity, beseeching him to give their crops seasonable rain. They shake their heads violently as they reiterate this prayer, till they work themselves into a phrensy, and the movement becomes involuntary. They go on thus wildly gesticulating, till a "little cloud like a man's hand" is seen. Then they arise, take up the drums, and dance the Kurrun on the rock, till Marang Booroo's response to their prayer is heard in the distant rumbling of thunder, and they go home rejoicing. They must go "fasting to the mount," and stay there till "there is a sound of abundance of rain," when they get them down to eat and drink. My informant tells me it always comes before evening. We must conclude that the old women are wonderfully clever at taking a "forecast," and do not commence the fast till they sniff the rain.

All the villagers living in the vicinity of the hill make offerings of goats, whenever they think it desirable to propitiate this spirit; but he is not invoked in cases of sickness, unless the ojha declares it necessary. Sometimes bullocks are offered.

The next in importance in Chota-Nagpore appears to be the spirit Dara, whom the Oraons and Moondahs living with them adore in the form of a carved post stuck up where the great *jatras* are held, or in the village dancing place. Dara appears to be a god of rather bacchanalian characteristics, worshipped amidst much revelling and wassail. A sacrifice to him of fowls is followed by a feast in his honour, at which all the elders drink themselves into a state of sottish drunkenness, whilst the young people dance and make love; and next day comes the *jatra* which all the country attend.

The penates are generally called "old folks." They are in fact the *manes* of the votaries' ancestors; votive offerings are made to them when their descendants go on a journey, and they are generally the first that are propitiated when there is sickness in the family. By the Singbhoom Kols, the *manes* of the ancestors of the principal lady of the house are also honoured. The offerings to them are made on the path by which she was brought home as a bride. Desaoolli and Jaeroolli are propitiated for harvests and for cattle, Chandoo Seekur, the same probably as the Chanala of the Hos, for children.

The Pahan has to solemnise regularly the following festivals. The Hurihur, at the commencement of the planting season. Every one then plants a branch of the Belowa in his field, and each contributes a fowl, a pitcher of beer, and a handful of rice to the feast. The sacrifice is offered to Desaoolli, Jaer Boori, and others, in the Saerna.

During the Sarhool—when the Sal tree blossoms—the sacrifice of a goat and fowls is offered in the Saerna by the Pahan to the *manes* of the founders of the village and to Dara. The introduction of the Sal blossom, in memory of the forest that was cleared when the village was formed, is very appropriate. At the khurria Poojah when the rice is harvested, the sacrifice is offered and the feast takes place on the Pahan's threshing floor.

Dalikattari: every second year a fowl, every third year a ram, every fourth year a buffalo. To provide what is required for this last, the Pahan holds the Dalikattaree land.

I have already alluded to the division of the Moondahs and their cognates into "Keelles" or clans. Many of the Oraon clans and some of the Moondah in Chota-Nagpore are called after animals, and they must not kill or eat what they are named after.

Thus the Moondah "Enidhi" aud Oraon "Minjrar" or Eel tribe will not kill or eat that fish. The Hawk, Crow, Heron tribes will not kill or eat those birds. Livingstone, quoted in Latham,* tells us that the sub-tribes of the Bitshaunas (or Bechuanas) are similarly named after certain animals, and a tribe never eats the animal from which it is named, using the term, "*ila,*" hate or dread, in reference to killing it.

The above curious coincidence tempts me to give a few more details regarding the Oraon clans.

The "Tirki"—have an objection to animals whose eyes are not yet open, and their own offspring are never shewn till they are wide awake.

The "Ekkr"—will not touch the head of a tortoise.

The "Katchoor"—object to water in which an elephant has been bathed."

The "Amdiar"—will not eat the foam of the river.

The "Kujrar"—will not eat the oil of the Kujri tree, or sit in its shade.

The "Tiga"—will not eat the monkey.

The Ho chiefs could give me no signification for the names in which their families rejoice. The following are the most aristocratic, the Boorooilli, the Porthi, Sincoi, Baipoi, Soondee, Bandri.

I do not know of any people who are more careful in regard

* Latham's "Ethnology", vol. ii, p. 160.

to the disposal of their dead than are the tribes of whom I am treating, especially the Singbhoom Kols and best classes of the Moondahs.

On the death of a Ho or Moondah, a very substantial coffin is constructed and placed on faggots of firewood. The body, carefully washed and anointed with oil and turmeric, is reverently laid in the coffin, and all the clothes and ornaments used by the deceased are placed with it, and also any money that he had about him when he died. Then the lid of the coffin is put on, and faggots piled above and around it, and the whole is burned. The cremation takes place in front of the deceased's house. Next morning, water is thrown on the ashes, and search made for the bones; all the larger fragments are carefully preserved, the remainder, with the ashes, are buried then and there. The selected bones are placed in a vessel and hung up in the house in a place where they may be continually viewed by the widow or mother. Thus they remain till the very extensive arrangements necessary for the final disposal are effected. A large monumental stone has to be selected, and it is sometimes so large that the men of several villages are employed to move it. It is brought to the family burial place, which with the Hos is close to their houses, and with the Oraons generally separated from the village by a stream. A deep round hole is dug beside the stone, and, when all is ready, a procession is formed, consisting of one old woman carrying the bones on a decorated bamboo tray, one or two men with deep-sounding wooden drums, and half-a-dozen young girls, those in the front rank carrying empty and partly-broken pitchers, and brass vessels. The procession moves with a solemn ghostly sliding step, in time to the deep-sounding drum. The old woman carries the tray on her head, but at regular intervals she slowly lowers it, and as she does so, the girls gently lower and mournfully reverse the pitchers and brass vessels, to shew that they are empty.

In this manner the remains are taken to the house of every friend and relative of the deceased, within a circle of a few miles, and to every house in the village; and, as it approaches, the inmates come out and mourn, as they call to mind all the good qualities of the deceased. The bones are thus conveyed to all his favourite haunts, to the fields he cultivated, to the grove he planted, to the threshing-floor where he worked, and to the *akrah* where he made merry. When this part of the ceremony is completed, the procession returns to the village, and moves in circles round the grave, gradually approaching its goal; at last it stops, and a quantity of rice and other food, cooked and uncooked, is now cast into the hole. The bones are then put into a new earthen vessel and deposited on the

rice, and the hole is filled in and covered with the large slab which effectually closes it against desecration.

The collection of these massive grave stones under the fine old tamarind trees is a remarkable feature in Kol villages, and almost an indelible one, for they are found in many places where Kols have not existed for centuries. Besides the grave stones, monumental stones are set up outside the village to the memory of men of note. They are fixed in an earthen plinth, on which, shaded by the pillar, the ghost is supposed to sit. The Kheriahs have collections of these monuments in the little enclosure round their houses, and offerings and libations are constantly made to them.

The funeral ceremonies above described are of a composite order, mingling, with the Hindoo custom of cremation, what was in all probability their original mode of burial; but a very profound reverence for the dead pervades them all. I think it is very probable that the Kols originally disposed of their dead differently. The coffin, though put together on the faggots that are to consume it, has projections as if to facilitate transport. Omit the burning and substitute burial, and we have the careful disposal and subsequent adoration of the dead that is practised by the Chinese; but the burning of the body and the long retention of the ashes in a portable form may have been adopted at a time when the tribe could not be certain of continued residence in one place.

Tickell has given at length the Ho legend of the origin of the human race. It is supremely absurd, and very few of the present generation know anything or care anything about it. I have always found such legends changeable and untrustworthy. With no written record to give them permanence, they are altered to suit either new conditions or the fancy of the reciter. Thus, though the Kols have known the English for little more than half a century, they assign to them a most honourable place in their genesis. The Assam Abors and Garrows do just the same.

I do not think that the present generation of Kols have any notion of a heaven or a hell that may not be traced to Brahminical or Christian teaching. The old idea is that the souls of the dead become "*bhoots*," spirits, but no thought of reward or punishment is connected with the change. When a Ho swears, the oath has no reference whatever to a future state. He prays, that if he speak not the truth he may be afflicted in this world with the loss of all—health, wealth, wife, children; that he may sow without reaping, and finally may be devoured by a tiger; but he swears not by any hope of happiness beyond the grave. He has in his primitive state no such hope, and I believe that most Indian aborigines, though they may have

some vague ideas of continuous existence, will be found equally devoid of original notions in regard to the judgment to come.

It may be said that the funeral ceremonies I have described indicate clearly a belief in resurrection, else why should food, clothes, and money, be burned with the body or buried with the ashes? The Kols have given me the same explanation of this that I once before received from the Chulikutta Mishmees in Upper Assam, who have no notion of any existence beyond the grave. They do not wish to benefit by the loss of their friend, which they would do if they were to appropriate any article belonging to him; they, therefore, give with him all his personalties, all property that he and he alone used and benefited by; but this does not apply to the stock of the farm and household property that all profit by, or even to new cloth, for that might have been procured for any member of the family. It often happens that a respectable "Ho" has goods of this nature, that he abstains from using even once, because, if once used, the article will be destroyed at his death.

The Moondah-Oraon races are passionately fond of field sports, and are so successful that large and small game soon disappear from the vicinity of considerable settlements; and they fear not to make a new settlement, consisting only of a few huts, in the jungles most infested by wild beasts. Every year, at the commencement of the hot season, they form great hunting parties, which are well described in Tickell's memoir. They are also greatly addicted to cock-fighting. They have periodical meets at assigned places where hundreds of fighting cocks are collected. Cruel steel spurs are used, aud the combat is always *à l'outrance,* the victims becoming the property of the owners of the victorious birds. This is, I think, the only stake. They are fond of fishing too, and some of them are very expert in spearing large fish.

The arms of the Kols are to this day what they were in the days of "*Rama*"—the bow and arrow and battle-axe. The bow is simply a piece of bamboo, and the string is of the same material. The war arrows have large broad blades doubly and trebly barbed, but they make them of all shapes; poison they do not use. They commence practice with the bow and arrow at the earliest age. In Singbhoom boys three and four years old and upwards, when herding cattle or otherwise engaged, have always their bow, and blunt and sharp arrows; the former for practice, the latter to bring down birds when they have a chance.

In the villages of Chota-Nagpore where the Oraon and Moondah are mixed up together, the difference of character between the two races is not much marked; but if we compare the Singbhoom Hos or Chota-Nagpore Mankees and the

Oraons, we see strong contrasts. The Oraon has the lively happy disposition of the Negro. He is fond of gaiety, decorating rather than clothing his person, and whether toiling or playing, is always cheerful.

The Ho or Moondah has more the dignity and reserve of the North American Indian, at least when he is sober. He appears to less advantage when he is drunk, and he is not unfrequently in that state. At all festivals and ceremonies, deep potations of the rice-beer called "*eeley*" are freely indulged in by both sexes. Inspirited by this beverage, the young men and girls dance together all day and half the night; but the dances are perfectly correct, and whenever these meetings have led to improprieties, it is always attributed to a too free indulgence in *eeley*. As a rule, the men are reserved and highly decorous in their treatment of the women; and the girls, though totally free from the prudery that secludes altogether or averts the head of a Hindoo or Mahommedan maiden when seen by a man, have a modest demeanour, combined with frank open manners and womanly grace.

It is said by some that at the seasons of their great festivals amongst themselves, breaches of chastity are of frequent occurrence; but the mere freedom of intercourse allowed to the sexes is likely to be viewed with unmerited prejudice and misconstrued by their neighbours of different race who place such restrictions upon it, and I believe that this may give rise to false imputations of impropriety. It is, at all events, a fact that illegitimate births are rare. Out of her own tribe, a Ho girl is hardly ever known to go astray, though from the freedom allowed to her and, for a tropical climate, the ripe age at which she is likely to be sought in marriage, she must have to pass through many temptations.

The Hos are acutely sensitive under abusive language that at all reflects upon them, and may be and often are driven to commit suicide by an angry word. If a woman appears mortified by anything that has been said, it is unsafe to let her go away till she is soothed. The men are almost as sensitive as the women, and you cannot offend them more than by doubting their word. It has often seemed to me that the more a statement tells against themselves, the more certain they are to tell the exact truth about it. It frequently happens that a man is himself the first person to bring to notice that he has committed a crime; he tells all about it, and deliberately gives himself up to be dealt with according to law.

The Oraon is, I think, less truthful, he is more given to vagabondising, and wandering over the face of the earth in search of employment; he soon loses all the freshness of his character. He returns after an absence of years, unimproved

in appearance, more given to drink and self-indulgence, less genial and truthful than before, with a bag of money that is soon improvidently spent. Those who have never left their own country have far more pleasing manners and dispositions, than those who return to it after years spent in other parts of India or beyond the seas. The fact is, they are not an improvable people. They are best seen in their wild state.

There is no more pleasing trait amongst all these tribes than their kindly affectionate manner one towards another. I never saw girls quarrelling, and never heard them abuse each other. They are the most unspiteful of their sex, and the men never coarsely abuse and seldom speak harshly of the women. This is remarkable on this side of India, where you seldom pass through a bazaar without hearing women screeching indecent abuse at each other across the street, whilst the men look on. A Kol girl's vocabulary is as free from bad language of this kind as a Bengalee's is full of it.

The young Oraons of both sexes are intensely fond of decorating their persons with beads and brass ornaments. These they entirely discard on embracing Christianity, and the converts may be always recognised by the total absence of all such adornment. The converts do not join in the dances or festivals, and must not even be seen as spectators when they are going on. They appear indeed to lose all relish for their old amusements, and shrink with horror at the idea of resuming their discarded ornaments. And as Christianity is rapidly spreading amongst them, and in all probability will continue to spread more and more rapidly every year, it is quite possible that in the course of a few generations the most marked characteristics of the races I am describing, will have been effaced for ever. It is marvellous with what decision old prejudices are abandoned, old customs discarded, and even tastes changed, when they become Christians; and there is now a widespread feeling amongst the Kols themselves that this change will inevitably come upon them all.

The Moondah-Oraon are a rapidly increasing people. We may form some calculation as to the rate of increase by the statistics of the Mission. In 1864 the baptised converts numbered 5,923, and in that year there were 195 births to 80 deaths. In 1865 there were 7,828 baptised Christians, and the births during the year were 309 to 86 deaths. The number of professing Christians is probably double the number registered as baptised.

II.—*A Few Notes on some Skulls of the Hill Tribes of India.* Collected by Dr. F. J. Mouat.

[*Read January 8th*, 1867.]

There are certain wild tribes in India, about which opinions are, I believe, unanimous, that they are the aborigines of the land. They are commonly called hill tribes, from occupying elevated, remote, and somewhat inaccessible districts; scattered tribes, from being dispersed, and in a great measure isolatedly so, over the whole country, and from a hypothesis that they once formed continuous communities which occupied the entire land; Tamilian tribes, from the languages they speak having some resemblances to the Tamil tongue, and Turanian tribes, from a great hypothesis that they are all derived from one source, which has been designated Turanian. By the same, or a similar hypothesis, all the other inhabitants of India are collectively named Aryan.

The former are in many respects, *i. e.*, in manners, customs, religion, etc., quite distinct from the people of the plains, the Aryan peoples usually denominated Hindoos as a whole, which is a mere general name, as the people themselves are divisible into numerous and distinct races. These hill tribes have long excited great interest, and a considerable amount of information has been collected about them in different parts of India. The philologists have studied their languages with much pains, compared them with each other, and with other languages, and have concluded that they form a distinct and at the same time self-related class, which has some alliances, as already mentioned, with the Tamil language. Able observers have described their manners and customs (to speak of them as one whole) in all their curious modifications in various provinces of India. Their physical characters have also attracted the attention of a number of those intelligent officers who have lived near or among them. There is no gentleman who has observed them with more pains and accuracy, and described their peculiarities better, than Lieutenant-Colonel E. T. Dalton, Commissioner of Chota-Nagpore, in Central India. The general result of these investigations may probably be correctly expressed in the words of Lieutenant-General Briggs in his well-known *Lectures on the Aboriginal Race of India*, who says:—"From their physical attributes and creeds, customs and legends, as well as from their

language, they are all closely affiliated, and are all of Thibetan or Bhutan origin" (p. 28).

Notwithstanding the large amount of attention that has been directed to the Hill Tribes of India by a great number of most able and patient observers, their craniology is, in a great measure, unknown. The difficulties which stand in the way of procuring authentic skulls of these wild people, who frequently practise cremation, and who entertain the superstitious notions of all uncivilised races respecting a sacredness of the dead, have formed a main cause of this. In European museums their crania are extremely rare, and, up to the present time, no number of them has been brought together in any of the museums of India. By the generous efforts of friends, and particularly of a distinguished Indian officer, Mr. Brian H. Hodgson, I have been able to obtain a few, and to some of these I wish now to direct attention.

The skulls on the table may be enumerated as follows:—1. The calvarium of a Gond man, of about fifty-five years of age. 2. The calvarium of a Cole man, of about sixty years of age. 3. The calvarium of a Gassee woman, of about twenty years of age. These three examples are derived from Singbhoom, which is in the Colehan or Ho country. They are of the greatest interest, as coming from one of the chief centres of the Hill Tribes—those Hill Tribes which have been admirably described by Lieutenant-Colonel Dalton, who has lived among them some years. 4. The two next specimens are perfect crania of Mishmees from Assam. 5. The next is the skull of a Khōnd man from Chekterpore, in Khōndistan, of about fifty years of age. Khōndistan is a tributary state, on the north of Orissa, subject to the Bengal Government. The Khorias are a wild people who have practised human sacrifices extensively; the victims for these are designated 'Meriahs,' and the individual whose skull is on the table was executed by the British authorities for the crime of Meriah sacrifice. 6. The last is the calvarium of an Irroolas man, of about fifty years of age. These people are the inhabitants of the Island of Streehareecotta, on the Coromandel coast, in Madras, and I owe it to the great good-will of Dr. Shortt.

The measurements of these skulls may now be given according to the method described in the *Crania Britannica*, which is as follows:—A. The internal capacity, determined by filling the skull with dry Calais sand and weighing it. This is expressed in ounces avoirdupois. All the other dimensions are expressed in inches and tenths of inches. Those taken with a graduated tape are,—B. The circumference taken round the calvarium about an inch above the fronto-nasal suture and over the pro-

tuberant part of the occipital. C. The fronto-occipital arch, from the fronto-nasal suture to the posterior edge of the occipital foramen, distinguishing—*a.* the frontal portion; *b.* the parietal; and *c.* the occipital portion. D. The intermastoid arch, from the tip of one mastoid process, across the vertex, to the tip of the other. E. The length, taken with callipers on Mr. Busk's excellent craniometer, like all the rest, from a spot about an inch above the fronto-nasal suture to the prominent part of the occiput. F. The extreme breadth, distinguishing whether it is parietal, *p*, or temporal, *t*. Next the frontal breadth, *a.* or the length between the most distant points of the frontal bone in the temporal region; *b.* the parietal breadth, or the length of that line between the parietal protuberances; and *c.* the occipital breadth, or the line between the most distant points of the occipital bone. G. The height, taken from the plane of the occipital foramen to the vertex; *a.* the frontal height, taken from the axis of the external auditory foramina to the most prominent point of the frontal bone; *b.* the parietal height, from the same line to the most prominent part of the vertex; and *c.* the occipital height, from the same axis to the most prominent part of the occipital bone. These three measures are best taken with my craniometer. H. The length of the face, from the fronto-nasal suture to the tip of the chin. I. The width of the face, from the outside of one zygoma to that of the other. Lastly, J. The ratio of the breadth F to the length E, taken as 100. And K. The ratio of the height G to the length E, taken as 100.

The series of rare skulls now brought forward is at once seen to divide itself into two sections. No observer can confuse them into one whole. The first section, which for convenience I will name the Hindoo form, includes the crania of the Gond, the Cole, the Gassee, the Khond, and the Irroolar. They are small in all their dimensions, elegant, long oval, dolichocephalic, tolerably orthognathous and European-like skulls—their most striking characteristic being their decided smallness or diminutiveness. The accompanying table has been prepared in order to place this peculiarity in as obvious a light as possible. The I division of the table contains the measurements of all the skulls brought forward. The II is limited to the four male skulls of this section, and gives their averages. In almost every dimension they are at once perceived to be very small. Their average internal capacity will do to indicate this perhaps better than any other dimension. It is 65·8 ounces. The average internal capacity of the two Mishmee skulls of men amounts to no less than 77 ounces, and in most of the other dimensions there is also an increase. The VI division of the table contains the

Table of the Measurements of Skulls of the Hill Tribes of India, and of Twelve English and Twenty Hindoo Skulls.

	A.	B.	C.	*a.*	*b.*	*c.*	D.	E.	F.	*a.*	*b.*	*c.*	G.	*a.*	*b.*	*c.*	H.	I.	J.	K.
I. No. 808 Gond, m. æt. 50 -	65·5	18·8	14·1	5·1	4·6	4·4	14·2	6·8	4·9p	4	4·7	3·8	5·4	4·6	4·7	4	—	4·7	·72	·79
807 Cole, m. æt. 55 -	66	19·3	14	4·7	4·8	5	13·9	6·8	5·1p	4·4	4·8	3·8	5·1	4·5	4·5	3·7	—	5·1	·75	·75
809 Gassee, f. æt. 25 -	65	19·6	14·1	4·9	4·9	4·7	13·6	7	5·3p	4·4	5	3·9	5·2	4·3	4·4	3·7	—	4·7	·75	·74
838 Mishmee, m. æt. 60	74·5	20·2	14·3	4·7	5·4	4·2	14·7	7	5·6t	4·6	4·8	4	5·4	4·5	4·9	4·4	4 1	5·4	·80	·77
839 Mishmee, m. æt. 50	80·5	20·6	15·2	5·2	5·4	4·6	15·2	7·4	5·8p	5	5·3	4·2	5·9	4·8	5·1	4·3	4·7	5·6	·78	·79
1462 Khond, m. æt. 50 -	62	19·2	14·7	5·2	5	4·5	13·7	6 9	4·9p	4·4	4·7	4	5·1	4·4	4·7	3·9	4·4	4·8	·71	·73
1453 Irroolar, m. æt. 55	70	19·8	14·4	5·2	5·1	4·1	14·3	7	5·2p	4·5	4·8	4·2	5·5	4·5	4·7	4	—	4·9	·74	·78
II. Averages of the 4 m. skulls of the Hill Tribes of Southern India, Nos. 808, 7, 1462, 1463 - - - - - - -	65·6	19·8	14·3	5	4·8	4·5	14	6·8	5	4·4	4·7	3·9	5·2	4·5	4·6	3·9	4·4	4·8	·73	·76
III. Averages of the 2 m. skulls of the Hill Tribes of Assam, Nos. 838 and 839 -	77	20·4	14·7	4·9	5·4	4·4	14·9	7·2	5·7	4·8	4·9	4·1	5·6	4·6	5	4·3	4·4	5·5	·79	·77
IV. Averages of 7 Lepcha, 4 Bodo, 4 Bhotia, and 3 Mishmee skulls, all m., of the Hill Tribes of the sub-Himalayan regions - - - -	75·7	20·1	14·5	4·8	5·2	4·4	14·6	6·9	5·4	4·6	4·7	4·2	5·4	4·6	4·8	3·9	4·4	5·2	·78	·78
V. Averages of 12 skulls of English men - - - - -	80·2	21·4	14·2	5·1	5·2	5	15·1	7·5	5·8	5	5·2	4·5	5·5	4·7	4·9	4·3	4·7	5	·77	·73
VI. Averages of 20 skulls of Hindoo men - - - - -	71	19·8	14·4	5	5	4·3	14·6	6·9	5·3	4·5	4·9	3·8	5·4	4·6	4·7	3·9	4·6	5	·76	·78

average measurements of twenty skulls of Hindoo men from Eastern Bengal. These, when compared with the dimensions of the twelve crania of Englishmen in the preceding division v, will be found to be decidedly small, but they do not descend to the extreme diminutiveness of the four Hill Tribe skulls of South India. The mean internal capacity of the latter, as before stated, is 65·8 ounces; that of the Hindoos 71 ounces. The internal capacity of the twelve English skulls, introduced as a standard of comparison, is 80·2 ounces. I do not go into all the other dimensions, lest the point to be demonstrated should become confused. They, however, indicate, when carefully studied, the proportionate diversities in the entire series of skulls. Suffice it to say that they correspond in the main with the internal capacities, rising or falling as these rise or fall.

In the general form of these diminutive crania of Hill Tribes of South India, there is a close agreement with the general form of the skulls of Hindoos, but they are decidedly less. One important point should be distinctly noted, that I am now, for the first time, endeavouring to point out the distinctions in the skull forms of the Hill Tribes of India. This has never before been attempted. And we are now of necessity obliged to be limited in the attempt by the scanty materials I have been able to obtain. Therefore, whatever conclusions may be deduced from them, it should be distinctly understood that they are based upon limited data and must be subject to the correction of further investigations. I have been long acquainted with the learned researches of different observers of the Hill Tribes of India, and have long seen the great desirableness, nay necessity, for the investigation of the craniological evidence upon the points inquired into. But it is only after years of search that I have been able to collect the materials I now possess for elucidating these points.

If we turn to the second section of skulls, represented by the two fine examples of Mishmee men, placed here as the representatives of the Hill Tribes of Northern or Sub-Himalayan India, and which may be considered to represent the second form, conveniently called Mongolian, we observe that they are quite distinct from the skulls of the Hindoo form. In the first place, they are large noble crania, having considerable dimensions in all directions. They are especially distinguished by their broad flat orthognathous faces, and by the brachycephaly, or close proximity to brachycephaly of their calvarium. In the former section, the nasal bones were of the moderately prominent, well-shaped European forms. Here they are totally changed. They are small, flat, and not prominent, and they are placed upon wide flattened frontal processes of the superior

maxillary bones; by which striking change the two orbits become widely separated, the bony interval between them being increased to about a third more than in the first section of the Hindoo form. Corresponding with this little dilation of all the bones of the face is a nearly equal lateral expansion of the calvarium, so as materially to shorten the brain-case. The decidedly greater dimensions of almost all the measurements of these skulls of the Mongolic form above those of the Hindoo form will be seen by the division III of the table, which gives the averages of the two Mishmee skulls—the internal capacity ascending to 77 ounces, whist the mean of the Hindoo form is only 65·8 ounces. In order to afford increased materials for comparison, I have introduced into the IV division of the table the measurements of the skulls of the men of the different Hill Tribes of the Sub-Himalayan region in Sikim and Nepal contained in my collection, which, as I before said, I owe to the generosity of the distinguished Mr. Brian H. Hodgson. These averages will be found to agree very closely with those of the Mishmees from Assam, and to differ equally widely from the means obtained from the Hill Tribe skulls of South India. In truth, the Mishmee crania upon the table are very fair representatives of those of the people of the more western Sub-Himalayan regions.

If we confine our attention chiefly to the item of internal capacity, we shall find the following striking results. Whilst the mean of the English skulls affords 80·2 ounces of sand, that of the Mishmees yields 77 ounces, the Sikim and Nepal series 75·7 ounces, that of the Hindoos of Eastern Bengal 71 ounces, that of the four calvaria of the Hill Tribes of South India only 65·8 ounces. It thus appears that the only people of Khondistan and their congeners possess in the mean a less amount of brain than an average Englishman represented by 14·4 ounces of Calais sand. That this immense difference of cerebral development lies at the basis of all the great essential, moral, and intellectual differences of the two races there need be no hesitation in affirming. And it is most probable that, could we analyse the brains of the two races minutely and distinguish clearly which portions are appropriated to certain functions, we should then have the key to the explanation of the peculiarities and the distinctions of the two races.

To revert to that classification of the Hill Tribes, the undoubted aborigines of India, made by men of great research and learning into one grand Tamulian or Turanian family, it becomes at once apparent that investigations into their physical characters, and especially into their craniology, affords no support whatever to such a view. Indeed, much more might be said,

and it seems only fair to add that craniological inquiry quite disproves their homogeneity. It proves that they must be separated into at least two classes, almost as far as the poles asunder, and, perhaps, into many more. That there may be a resemblance in the manners and customs of all these poople, and that there may be some resemblances also in the languages they speak, resemblances to be made out by recondite research, amounts in our estimate to extremely little in the face of these mighty differences of organisation. Indeed, as a general conclusion, it may be safely said that the Hill Tribes of Lower India agree much more closely with the Hindoos of the Plains than with their supposed congeners of the Sub-Himalayan regions.

In the expression of views so widely opposed to those of the highest authorities, I wish to maintain most decided modesty, especially whilst I am in the possession of so few authentic data. I will use the utmost diligence to obtain further examples of the crania of the Hill Tribes of India. But even at the present moment, the allegiance I owe to scientific truth requires that I should make an open and candid declaration of what I have already observed.

III.—*On the Plurality of the Races of Man.* By J. Crawfurd, Esq., F.R.S.

[*Read Jan. 22nd*, 1867.]

It has been long a popular belief among the nations of Europe, but chiefly confined to them, that all the diverse races of man are sprung from a single family, and that wide differences in complexion, features, bodily form, and intellectual endowments which now exist, are but varieties, the result of long time and the operation of climate and localities. I believe this view to be contrary to nature, to be unsupported by historical facts, and to be against all probability, and of this view I propose to attempt a refutation in the present paper.

What the races of man now are they have been from the earliest dawn of authentic history. The representations of Egyptians and Negroes on the monuments of Egypt, estimated to be 4,000 and 5,000 years old, differ in no appreciable degree from the Egyptians and Negroes of the present day. The skeleton of an Egyptian mummy does not differ from that of a modern Egyptian skeleton, nor is there any reason to believe that it was differently covered with flesh. The skeletons of Swiss and Belgians, as found in lake pile-dwellings and caves which may be as old as the monuments of Egypt, although those of arrant savages, are pronounced to be identical with those of the civilised inhabitants of Switzerland and Belgium of the present day. Neither our knowledge nor experience points at any possible means by which the variety which now characterises the races of man could have been brought about.

The union of any two opposite races of man is followed by an offspring partaking equally of the characteristics of both parties, just as would be the case with any two closely-allied individuals of the lower animals of the same genus or family. A human albino is abnormal only in wanting the colouring matter in the skin and the other integuments. This accidental exception differs in no respect from other individuals of the race he belongs to: the African, the European, the Hindu, the Burmese, the American, and the Malay albino, are, with the exception of the colouring matter of the integuments, the same as the races they respectively belong to. There is here certainly a disposition to inherit the absence of the colouring matter, as there is of other abnormal defects. But the offspring, for example, of a true

Negro and an albino Negro will not, as would be the case were the parents of different races, be a progeny partaking of the characters of the parents in nearly an equal degree, but either a black or an albino African. The offspring of two albinos of opposite races may possibly be an albino, but, whether so or not, will partake equally of all the other characters of the two parents. The albino, therefore, as an argument to account for the existing variety in the races of man, is of no value whatever, and one only wonders why it should ever have been adduced with this view, for it is obviously no more to the purpose, than supposing the existence of a race of man, deaf and dumb, or a race with hare lips, or one with supplemental fingers and toes.

If the races of man as they now exist are mere varieties of a one primæval stock, their dispersion and the changes they have undergone must have taken place before there was any party to record it, that is, in the rude and savage state of man, or in that feeble condition when distant migration was an impossibility. Even when men through increased knowledge and progress in the arts have acquired considerable power, there is usually no disposition to distant migration. Thus, the Jews of the Pentateuch knew no nation but their nearest neighbours, the Phœnicians, the Egyptians, the Ethiopians, and the Chaldeans, and, if the manners of some of these had not been nomadic or wandering, they would not have known even so many. In time their acquaintance was extended to Babylonians, Persians, Greeks, and Romans, and this in no case as the result of peaceful migration, but always through the invasion of conquerors. The knowledge which the early Greeks and Romans had of foreign nations was equally limited, and at the highest limit of their power their knowledge of the eastern nations extended only to a partial acquaintance with the Hindus, while to the west it reached no farther than Spain and Britain. The Europe of the civilised Greeks and Romans did not include Scandinavia, or Poland, or Russia, and was but a fragment of actual Europe. Their Africa embraced only a narrow strip of land along the shores of the Mediterranean and Atlantic with the valley of the Nile. Their Asia excluded every continental region lying east of Hindustan, and every island from Sumatra to the Japanese Archipelago.

The knowledge which the Greeks and Romans possessed of foreign countries and nations was almost wholly the result of conquest; and, indeed, any other means of extending geographical knowledge than sheer force could not have existed until the discoveries of the last four centuries had been made. With our present means we have gone on discovering one country after another, and such countries often inhabited by races of man before unknown.

If, then, the most civilised, potent, and enterprising nations of antiquity had power to acquire but a partial knowledge of the earth and its inhabitants, how can we for a moment imagine, that feeble savages should be able to surmount far greater difficulties than they did? for the theory supposes these rude and helpless men to have peopled nearly the whole earth; as, with very slender exceptions, every corner of it capable of sustaining human life has been found inhabited by one race of man or another. We may safely conclude, then, that when the earth assumed its present form, species of man were distributed over its surface in the same manner as species of the lower animals and of plants. The spread or dispersion of man according to the popular theory would have amounted to nothing less than a miracle, but a miracle is a cause inadmissible in science, or at least ought to be restricted to the one great and for ever inscrutable secret, the Creation itself.

A main argument in favour of the supposed unity of all the races of man, or of their derivation from a single stock or family, is derived from the fancied sterility of the offspring of different species of the lower animals, for they too, like man, are supposed by the popular theory to be derived from a single stock. All the races of man, however differing in complexion, features, stature, or mental endowment, agree in the period of gestation, of puberty, of adolescence, in longevity, and in the manner of nutrition. The union of any two results in an indefinitely fertile offspring, and from this fact is deduced the conclusion that all the races of man consist of a single species. I am satisfied, however, that the pure unmixed races of man are wholly distinct species of one genus, and that all the lower animals which unite to this production of a fertile offspring are also distinct species of different genera, and that wherever with the latter the relation is as close as with the races of man, the result of a union between any two of them will be a fertile offspring. The offspring of the horse and ass, or common mule, so often quoted, is a sterile hybrid, but it is not a case in point, for the parents are not here closely allied species, but species of two different genera of the same natural family. The offspring of the ass and zebra might probably be found a fertile hybrid, although the fact has not been tested by experience. The progeny of the common fowl and the common pheasant is a sterile hybrid, the birds, in this case, belonging to two distinct genera of the same natural family.

In the island of Java exist two distinct species of gallus, the *Bangkiva*, from which proceeds our common poultry; and the *Gallus varius*, a beautiful bird with greenish plumage.

In confinement the two birds will breed, but the cross is a mule. This is a beautiful bird kept for ornament in the poultry yards of the Javanese princes, and renowned in Javanese poetry under the name of the pakiser. The sterility of the cross, in this case, may give rise to a suspicion that the two birds, although represented as of the same genus, really belong to two distinct genera. At all events, the fact implies that their habits are remote from each other.

It appears to me a fact admitting of satisfactory proof, that whenever any two species of the lower animals are as closely allied as are the different races of man, their union will be followed by a fertile offspring. Instead of the lower animals having a single origin, we must suppose them to have many, for otherwise their dissemination would, in most cases, be a geographical impossibility. In the early, and therefore rude and feeble, state of man, there existed no possible means of communication between one remote region of the earth and another. The Old and New World had but one domestic animal in common, the dog, and such also was the case between the rest of the world and the continent of Australia. If man could not carry himself to America or Australia, still less could he have been able to convey the dog, and certainly the dog could not go by itself. This is still more applicable to the larger domestic animals.

Several of the wild sources of the domestic animals have disappeared, as that of the horse, the camel, and the sheep: others, however, still exist. There is at least one wild dog in India, and another far away in Australia, seemingly as different as are the different species of wolves, foxes, or jackals. They breed, however, freely and indefinitely with any ordinary domestic dog. In the wild state the different species of animals of the same genus, however closely allied, never intermix, but they seem to do so freely when under the control of man. The llama and alpaca of Peru inhabiting the same mountains never intermix, but do so freely in the domestic state, the offspring being as fertile as the parents. There exist in India and the Indian Archipelago at least four wholly distinct species of wild oxen, namely, the gaur of Central India, the yak of Tibet, the gayal of Eastern Bengal and Asam, and the banteng of Burmah, of the Malay Peninsula, of Java, and of Borneo. The three last mix freely with the common cattle of the country, the crosses being as fertile as the parents. It is not so with the buffalo, which also exists in the wild state in Bengal. In the domestic state it pastures in the same fields with the common oxen, but no more commixes with them than does either with horses or asses. It is, in fact, an animal very different in form, in habits, and in constitution from the ox, and

simply belongs only to the same natural family, as the ass does to the same family as the horse. The sheep and goat are examples to the same effect. They belong to the same family, and like the horse and ass belong to different genera too remote from each other for the production even of a sterile offspring.

One fact deserves notice for its singularity, namely, that whether in the wild or tame state no sexual intercourse is ever known to take place between any two species of the numerous family of the apes, that which is supposed to bear the closest resemblance of all others to man. Mr. Bates, in his instructive account of the valley of the Amazon, tells us of two distinct species of monkeys in form and size entirely alike, both having the same peculiar red face, the only difference between them being that one has some white spots which the other wants. Their habitats are within fifty miles of each other, but no union takes place between them.

The great difference which is found to exist in the size, form, and colours of the greater number of our domestic animals has, most probably, arisen chiefly from each kind being derived not from one, but from several wild original species, so closely allied as to admit of their pairing under man's control, although never doing so in their native state. This view seems the more likely when we find that several of them that are ascertained to have proceeded from a single wild species, either do not sport at all, or but in a very small degree. The wild ass of the desert differs but little from the ass represented on the paintings of the tombs of Egypt probably some 4,000 years old, or from the ass of the same country of the present day. Even the ass of Europe, of India, and of Northern China, does not materially differ from the wild ass. The Arabian and the Bactrian camel, probably derived from two distinct wild species, are from generation to generation the same, differing only in the greater or less quantity of their fur, according to the climate of the countries in which they happen to be naturalised. That they are not varieties of a single stock seems sufficiently proved by the Arabian camel having always one hump, and the Bactrian as invariably two.

The Asiatic elephant is domesticated and bred in the country of the Birmese, Siamese, and Anamese, like any other domesticated cattle; but in this state does not sport at all, and is not to be distinguished from the wild elephant, for here there is unquestionably but one species. The reindeer derived from a single wild species has been domesticated for many ages, but is the same in the domestic and wild state. The domesticated buffalo, or *Bos bubalus* of naturalists, is derived from a single wild species, and the only variety with it is from black (its

natural colour) to white, that is, by the presence or absence of the colouring matter of the skin and hair, the white being a mere albino, in this animal of frequent occurrence. The domestic swan comes from a single wild species, and does not sport at all. The peacock is also derived from a single species, and sports only to an occasional white, the spots of the wild bird being, however, still distinguishable in a strong light. The numida or gallini is derived from two wild species, closely resembling each other, and sports but in a very trifling degree. The domestic goose of Europe is derived from two different wild species, not materially differing from each other, and in so far as colour is concerned it sports only from grey to white, the female being almost always of the first and the male of the last colour. The turkey is derived from a single species, a native of Mexico, and sports only into two colours, a dirty white and a black of metallic lustre, probably the primitive colour. The rabbit is believed to be derived from a single wild species, and from its primitive colour of grey sports only into black or white.

The domestic duck of Europe is generally supposed to be derived from the wild mallard, and the great extent to which it sports is usually thought to be the sole result of domestication; but as there are several species of wild duck amenable to domestication, the great probability is that several wild species contribute by their union to the great variety of the domestic duck. The wild mallard, preserved in ponds and aviaries for generations, is ascertained to undergo no change of form or plumage. The domestic duck of China differs widely from that of Europe. Instead of sporting like the latter, it is of one invariable dirty brown colour, and has the erect gait of a penguin. The Chinese goose, the *Anas cygnoides* of naturalists, is a wholly distinct species from the domestic geese of Europe, but pairs readily with them, and the offspring is fertile.

It must be admitted, however, that there is more difficulty in accounting for the extraordinary degree to which variety is found, whether as to size, plumage, or character, in the common fowl, if, as is generally believed, all the varieties come from a single wild species. This, however, may not be the case. The bird is found in the wild state in every country of Asia and its islands, from Hindustan to Japan, both inclusive, and in the first of these, the supposed parent country of the poultry of Europe, there exist, at least, two closely allied wild species.

In this country two species of pheasant have been naturalised; the one a native of Eastern Europe and Western Asia,

and the other of Northern China, the last being distinguished from the first by a somewhat smaller size and the possession of a white collar round the neck. Notwithstanding the remoteness of the countries from which they derive their origin, the two species breed freely, *inter se*, and their progeny is indefinitely fertile. Among the water fowl kept in our ponds, each species keeps apart and breeds, but after an experience of several generations, no sporting in size, form, or colour, is observed to have taken place in any of the species.

With many of the domestic animals, however, variety in size, form, and colour, is almost endless. The dog, the hog, the horse, and the ox are striking examples. Considering their wide dissemination, and their widely different character in different countries, the great probability is that they have sprung, not from one, but from many wild species, so closely allied as to be capable of breeding freely under human control. Without such a supposition, it is difficult to imagine how animals so widely different in size, form, colour, and characters, could have sprung from one source. No skill in breeding could convert a spaniel into a mastiff, or a Shetland pony into an English dray-horse, or the converse of these, not to say that in the early, and therefore, rude state of society in which animals were first reclaimed, no skill or care in breeding is ever bestowed, the animals being left to multiply without interference or direction. In the few cases in which the domestic animals are traceable to their wild sources, we find the latter to be, to all appearance, distinct species. The wild dog of Australia is a very different animal from that of India. The wild oxen of India differ from those of the Burmese and Malayan countries, and all these differ from the urus, the supposed original of the oxen of Europe. When, therefore, we consider the countless variety which exists in the dogs, hogs, oxen, and horses of the Old World, from Spain and Britain to China and Japan, and the total impossibility of any such communication taking place in rude times between countries so remote and so utterly unknown to each other as would admit of the domestic animals being transmitted from one to the other, we must, I think, come to the conclusion that in many cases they must have sprung from different and distinct wild species.

Independent, however, of variety proceeding from the crossing of closely allied species, there is evidently a special disposition to sport into varieties in some of our domestic animals, while in others there is very little or even none at all. It is probably with domesticated animals as with cultivated plants, some of which do not sport at all while others do so inter-

minably. The common fowl may, perhaps, come under this head, but the most remarkable example is afforded by the almost countless family of pigeons, which, from the size of a thrush to near that of a turkey, are found from the equator to the utmost limit of the temperate zone. In this vast multitude there is but a single species that admits of being domesticated,—the common blue rock pigeon, from which proceed the endless variety of this bird.

The ox, the horse, the ass, and the hog did not exist in America and its islands, in Australia, in New Zealand, or in the great group of the Philippines, either in the wild or domestic state, and their introduction into these regions is a matter of modern authentic history. The researches of the indefatigable and skilful naturalists who have examined the relics found in the pile villages of the Swiss lakes, would seem to prove that several distinct species of the ox, the sheep, and the hog had been domesticated by their builders. In no single case can we trace the first domestication of any animal whatsoever. The first domestication of animals was effected by men in various and independent localities when just emerging from the savage state, and is one of the events which carry us furthest back in the antiquity of man. The dog, the llama, and the turkey, had immemoriably been domesticated in America when it was discovered, and even the savages of Australia, when first seen, had occasionally domesticated the dog, the only animal of that continent amenable to domestication.

With respect to animals not amenable to domestication, it cannot, I imagine, be doubted, that closely allied species, although never intermixing in the state of nature, might, were the experiment tried, under man's dominion, pair and multiply to the production of fertile hybrids. This would most probably happen with the different species respectively of the fox, of the jackall, of the wolf, and even with some species of the bear.

But the varieties which take place in the lower animals in the state of domestication, bear no true analogy to the differences which obtain in the races of man. With slight modifications of form, stature, and complexion, the offspring of European parents is an European, of Arabian an Arab, of Hindus a Hindu, of Chinese a Chinese, of Negroes a Negro, of Malays a Malay. The result of the union of any two of the races of man is a being partaking equally of the properties of the two parents, similar in all respects, fertility excepted, to the offspring of two remotely allied species of the lower animals, of the same natural family, as in the examples of the mules between the horse and ass, between the horse and

celebrated Blumenbach imagines all the domestic animals to be degenerate wild ones; but for such a fancy there seems to be no real foundation, to judge from the few cases in which domesticated animals can be traced with tolerable certainty to their wild originals. The tame ox does not suffer in a comparison with the urus and wild oxen of India. It is only less fleet, because speed is not necessary to it. The domestic ass, when its breeding is attended to, is a much superior animal to the wild one. Our common poultry want the power of flight, which is not necessary to them, but they gain greatly in size. The domestic goose and duck are larger than their wild originals, and the cock is a larger and handsomer bird than the same bird in the jungles of India. The domestic pigeon is larger than the blue rock pigeon, and even equally swift of flight. The peacock is the same in an European poultry-yard as in an Indian forest. The mastiff, the greyhound, the pointer, and the shepherd's dog, are surely not degenerations from the wild dog of India or the dingo of Australia.

But it is the domestic hog to which Blumenbach especially refers as the most signal example of what he is pleased to call degeneration, and he gives it this preference, because, according to him, all the domestic hogs in the world have their source in the wild boar of Europe, and because the hog has been more subjected to the influences of climate and food than any other domesticated animals. The assumed facts, however, are either unproven or erroneous. It is not proved, nor is it likely to be true, that all the domestic hogs from Spain and Britain to China and Japan are derived from the wild boar of Europe, for within the wide geographical limits referred to there exist wild hogs of several species. As to the influence of climate, the horse equals the hog, and the dog far exceeds it, for it is not only found under the Equator, but far within the Polar Circle, where the hog is never seen. Even in the matter of food the dog is as omnivorous and indiscriminate as the hog itself.

If the facts stated in the course of this paper be reliable, the arguments for the unity of man, are fallacious, and the conclusion we must come to is that the different races of man are really as distinct species as are any of the closely allied species of the lower animals—that man, in short, like the lower animals, consists of a genus comprising many species, due allowance made for the inexpressible disparity which exists between him and the most highly organised of the lower animals.

IV.—*On the Supposed Aborigines of India as distinguished from its Civilised Inhabitants.* By J. Crawfurd, Esq., F.R.S.

[*Read Feb.* 12*th*, 1867.]

In many parts of India there exist, as is well known, rude and even savage tribes, differing widely in manners, customs, religion, and not unfrequently even in language, from the great body of the civilised inhabitants. People in this state of society are found only in hilly or mountainous districts, more or less inaccessible to conquest, and by their comparative sterility holding out little temptation to conquest and occupation. They are never seen in the fertile and well-watered alluvial valleys of the great rivers, which, on the contrary, are inhabited by civilised nations, however differing among themselves in manners and language. Linguists and craniologists have invented a theory to account for this state of things, which supposes the rude mountaineers to be the sole aborigines of India, while it imagines the civilised inhabitants to be intrusive strangers, who in a remote antiquity invaded India, conquered it, and settled in it under the imposed names of Aryans for Northern, and Turanians for Southern India. This view appears to me utterly groundless, and the object of this essay is its refutation.

In the first place, then, to suppose so great and fertile a region of the earth, and one consequently so favourable to the promotion of an early civilisation, to have been within the historical period destitute of any other original inhabitants than the few rude tribes now confined to its least favourable localities, until it came to be peopled by immigrant strangers from remote countries, is contrary to what is known to be the case in all other great portions of the globe. For my own part, I am satisfied that both the mountaineers and the inhabitants of the open plains and valleys are alike natives of the soil and of the same race, allowance made for such varieties of type as are found to exist in other large regions of the earth, as for example in Europe and in Western Asia. With such allowance, a common character distinguishes the people of Hindustan from all the other races of man just as complete as that which distinguishes the European, the Chinese, and the Malayan race. The Hindus in person, and more especially in physiognomy, may be fairly described

as Europeans with a complexion more or less black. In intellectual and moral qualities they are peculiar and distinct from all the other races of man, and their peculiarity is developed in the institutions which have sprung from it, so widely different from those of all other races of man placed under similar conditions of physical geography.

But wholly independent of the argument to be derived from the physical and mental peculiarities of the Hindus, the utter impossibility of the great mass of the people of Hindustan being the descendants of remote strangers will appear transparent when we consider the conditions under which an immigration of remote strangers must have taken place, and those under which their settlement must have been effected. No one even ventures to conjecture when or how the so-called Turanians, supposed by the theory to have been of a Turkish or Mongol race, came to invade Southern India, and to form the forefathers of the present civilised inhabitants of that region, who bear no likeness whatever in features, person, form, or colour, to their imagined ancestors. But the Aryans, supposed to be the ancestors of all the people of Northern India except its mountain tribes, are asserted to have emigrated from some part of what is now Persia, and the event to have taken place some thirty ages ago. Let it be seen, then, how an invasion from Persia to India must have taken place. From the nearest point of Persia to the nearest of Hindustan, there intervene ten degrees of longitude, or as the crow flies about six hundred miles, but to this must be added the windings of a mountainous road, if there was a road or even a path at all.

The emigrants must have partaken of the characters of migratory shepherds in possession of horses, oxen, sheep, and camels, and they would consist chiefly of cavalry. They would have to fight, as all their successors have had to fight, all the way to India through hostile and warlike tribes of barbarians. The emigrants must have been an army, or, at all events, an armed multitude subject to a rude discipline. Like all armies, rude or civilised, the women would from necessity be few, and the few would not be of the class which contributes to the increase of population. The Aryan emigrants would certainly not have invaded India unless they had heard of its wealth, for they could have no motive in invading a country without wealth to plunder, and which is the same thing a country without any other inhabitants than the rude mountaineers called by the theory the aborigines. The plains and valleys of India must at the time of this remote emigration have been inhabited and cultivated by Hindus who had already acquired a considerable measure of civilisation. The invaders would have found them

no more difficult of conquest than did all their historic successors in the same enterprise. The conquerors arriving without families would necessarily intermarry with the Hindus, and in four or five generations their descendants, in conformity with the known laws of the commixture of races, would not be distinguishable from them. Such has been the course followed by all conquerors in all ages and countries. The Turks, the Persians, and the Affghans who have continued to make conquests in and to establish themselves in India itself from the end of the tenth to the beginning of the eleventh century and down to the middle of the eighteenth, followed this indispensable course, and their descendants are now but rarely to be distinguished from the native Hindus. It has been the same with the Jews, the Syrians under the name of Nestorian Christians, and the Arabs, who have formed peaceful settlements in India. In all these cases, the adventurers came to seek their fortunes in India, and reaching it by difficult and tedious voyages, they came, at least for the most part, without their families, and intermarrying with the native inhabitants became in a few generations not distinguishable from them. Hence we have the descendants of Jews, Syrians, and Arabs, as black as the Hindus they are living among. The only exception to this rule is found in the Persian emigrants who, a thousand years ago, emigrated from Persia after its invasion, conquest, and conversion by the Arabs, settling in the western part of India. These alone were accompanied by their families, and steadily refusing to intermix with the natives of India, they continue the same Persians they were when they quitted their parent country; a result arising from the same cause that Anglo-Americans are English as well on the western as on the eastern side of the Atlantic, namely, that the emigrants consisted of both sexes, and that with almost imperceptible exceptions they declined intermixture with the native inhabitants. In all emigrations the males far exceed the females in number, and when the adventurers have to fight their way, the latter must be a mere fraction. Such is the case even in modern emigration, when a voyage to America can be performed with safety and convenience in a few weeks, and even to the Antipodes in a few months. Thus in the annual migrations from our own country, the men are to the women, children included, in the proportion of two to one.

The great mass of the people of India consisting of its civilised inhabitants are Hindus with a few inappreciable drops of foreign blood in their veins, and the supposed aborigines are also equally Hindus without any foreign blood. The difference between them is one arising from physical

geography. The inhabitants of the plains and valleys have increased in civilisation and in numbers owing to the auspicious conditions of their local position, while the mountaineers have continued to be rude and few from the unfavourable nature of theirs.

The wild tribes of India are chiefly distinguished from the civilised nations by adventitious or supervenient characters, such as manners, language, and religion. Now and then they are found to speak a *patois* of the languages of their more civilised neighbours, indicating encroachment on the part of the latter, but more frequently they speak peculiar languages of their own. They have not adopted the religion of the Hindus, but follow their own gods and their own superstitions. In their social condition there is much diversity arising from differences of opportunities, a few being little better than savage hunters, while the majority have made considerable advances in civilisation. As to physical form, they partake of the general Hindu type, and differ no more from it than one nation of the civilised people of India does from another, than does, for example, a native of Bengal from a native of the Punjaub, or than does a Cashmerian from a Tamil of Southern India.

The general accordance of the wild tribes in the Hindu type is, indeed, admitted even by those writers who have adopted the hypothesis of their being the only aborigines of India. Among these is Colonel Dalton, who has so accurately described the hill tribes of the Central Plateau of India under the general name of Kols, an abusive epithet given to them by their civilised neighbours, the people of Bengal, and which embraces several distinct tribes speaking different languages. I take as examples two of the most considerable and most characteristic of these tribes, namely, the Moondahs and the Oraons. The first of these are thus described by Colonel Dalton:—

"They are the most compact, the purest, most powerful, and most interesting division of the Kols, and in appearance decidedly the best looking. In their erect carriage and fine manly bearing, they look like a people who have maintained and are proud of their independence. Many have features of sufficiently good cast to entitle them to rank as Aryans, high noses, large but well formed mouths, beautiful teeth, and the facial angle as good as in the Hindu race. The figure, both of the male and female, freely displayed by the extreme scantiness of their costume, are often models of beauty, but this description applies only to the people of the highly cultivated part of the country who have seldom been subjected to severe privation, and who generally fare right well. The inhabitants of the imperfectly reclaimed hill forests are more savage-looking, but

hundred square miles, contain plateaus, some of which attain the elevation of from five thousand to seven thousand feet, while the highest mountain peak is eight thousand seven hundred feet above the sea level.

The inhabitants of this range consist of five different tribes, four of which have each their own separate and independent language, while the fifth, the most numerous and the most industrious, speaks the Canarese tongue, that of their nearest civilised neighbours, a fact from which we may be disposed to consider them as stranger immigrants. It is this tribe alone which has adopted the manners, institutions, and religion of the Brahmins.

All the five tribes possess the usual features and bodily form of the Hindus of Southern India; but this character is most remarkably pronounced in the small tribe called the Todars, whose number is computed not to exceed six hundred, and who occupy the highest of the mountain uplands. They are herdsmen, as their name, which is the corruption of a Tamil word having this meaning, implies; their only cattle being the buffalo, the milk of which forms their chief aliment. All European observers agree in considering the Todars as a handsome race, above the average stature of Hindus, with regular features and elevated countenances—in short, Greeks with black skins. But the same account might be very faithfully given of several other Hindu peoples; such, for example, as the Seiks and the Cashmirians.

The believers in the Aryan theory are much puzzled by the Todars. They ought, were they aborigines, to have, according to the theory, Negroid features; but, on the contrary, they happen to have European, and therefore, in despite of their small numbers, their low social status, and their geographical position in a remote corner of India difficult of access, they pronounce them to be a race of foreign Caucasian conquerors, without being able even to guess of whom they came, where they came from, or when they settled in the upper plateau of the isolated Nilgharri mountains.

It is an opinion very generally entertained by Indian ethnologists, that the races which they suppose to be the aborigines of India partake of a Negro character, in contradistinction to the civilised people of the low lands; but this is a notion for which I am satisfied there is no ground whatever. Throughout the continent of India—indeed, throughout the entire continent of Asia—no Negro or Negroid race has ever been found to exist, the only exception being a few pigmy Negroes in the interior of the Malay peninsula, which is rather a portion of the neighbouring archipelago than of the Asiatic continent.

Wherever Negritos or Negroid races really exist, their presence is unmistakably pronounced, as in the case of the Andaman islands, in the mountains of the Malay peninsula, in several of the Philippine islands, and in the long range of islands which extends from New Guinea to the Fiji group in the Southern Pacific. Everywhere their peculiar physical character is clearly indicated. Sometimes they have whole islands to themselves, as in the instances of the Andamans, New Guinea, and some of the islands of the Southern Pacific; but even when they are joint occupants with other races, as in the Malayan peninsula and the Philippines, they dwell isolated in the mountains, never intermixing with the fairer and more highly endowed races their neighbours. All, it will be seen, that so careful and faithful an observer as Col. Dalton can say of his most ill-favoured race of mountaineers, the Oraons, is that he has "seen amongst them heads that in the woolly crispness of the hair completed the similitude of the Oraons to the Negro." He finds no such resemblance in the better looking Moondah tribe. "When," says he, "it varies from the Aryan or Caucasian type, it appears to me rather to merge into the Mongolian than the Negro." No doubt such heads and features as Col. Dalton describes would be found among the Kols; but they are also to be found in every race of man. Thus Col. Dalton would certainly find occasionally among his own countrymen heads and faces that, with the addition of a black skin, would bear a considerable resemblance to an African Negro, and other heads which, with a yellow skin superadded, might readily be mistaken for Mongols. Rules are not to be deduced from exceptions.

But the existence of rude and even savage tribes dispersed among a civilised people, although both may be of the same race of man, is far from being confined to Hindustan. The countries which border India to the east, and lie between it and China, afford many examples. These are Burmah, Siam, Cambodia, and Anam. Within our own portion of the first of these, embracing 90,000 square miles, there exist five rude tribes, numbering little short of 400,000, or near one-fifth part of the whole population. They will be found to be numerous in the inverse proportion to civilisation, as evinced in this example, for in the social scale the Burmese are far below the Hindus, and the fact implies that all would be equally civilised if all had the same opportunities. Such tribes exist, also, in Siam, in Cambodia, and in Anam. While the more civilised nations occupy the well watered plains and valleys, the ruder tribes, just as in India, are found only in mountain or hilly regions, or in jungles. They speak languages which not only

differ among themselves, but also from the languages of the civilised nations. Their social condition varies from that of arrant savages to that of peaceful but rude agriculturists. As the wild tribes of India have rejected the religion and the institutions of the Brahmins, those of Indo-China have rejected the Buddhist. The rude tribes of India are wholly ignorant of letters, and so are those of Indo-China. As the languages of the rude tribes of India resemble the cultivated tongues of the same region in being polysyllabic, so do the languages of the rude tribes of Indo-China resemble those of the civilised nations of the same country in being monosyllabic.

As to physical form, the rude Indo-Chinese tribes differ in no essential respect from the civilised nations among whom they are dispersed. Like them, they are of short squab stature, of brown, but never black, complexion, with noses never elevated, and chins nearly destitute of beard.

But similar wild tribes to those of India are found to exist even among the Chinese, who have made a more substantial progress in civilisation than the Hindus. There they are absent in the central and eastern provinces, so favoured by well watered extensive plains, but are abundant in the mountainous and comparatively sterile western provinces, such as Quangsi, Sechuen, and, above all, the great province of Yunan. No doubt they differ in every province, or even district of a province, in language and manners, and are probably as numerous as in India or the Indo-Chinese countries; but we possess no special knowledge respecting them, and all we know is that they are generally mountaineers, that they have rejected the language and institutions of the Chinese, that in race they are essentially Chinese, and that they are known to the Chinese by the common appellation of Myo-tse, which signifies "children of the soil", or aborigines; the Chinese in this case seemingly embracing the theory of our own Indian ethnologists, that these wild tribes alone are aboriginal, while the millions of the civilised Chinese must be strangers. They do not, however, venture to call them immigrants, for they have no convenient Aryana to refer to.

Of a similar condition of society with that existing in Hindustan, we have good examples in some of the great islands of the Malay and Philippine archipelagos. The question here, as in India, is one of physical geography. If the land be fertile and well watered, the civilised predominate; and if the contrary, the wild tribes do so. In Sumatra, in Celebes, in the peninsula, and in Luçon, the civilised inhabitants—men possessed of corn, and cattle, and letters—form the bulk of the inhabitants; while the wild tribes are a small minority. In

Borneo, from its unsuitableness to the promotion of civilisation, wild tribes, hardly on a level with the South Sea Islanders, form the great majority; while in Java and the small islands lying immediately east of it, owing to their extraordinary fertility, all the inhabitants are civilised, the wild tribes having been long extinguished or converted. In all these cases the civilised and the wild are of the same race of man, save in the few cases where there exist negritos, which, although always among the rude tribes, cannot be confounded with them.

We need not, however, go beyond Europe for illustrations of a state of society similar to that of India, in so far as concerns the existence in one and the same country of men in very opposite conditions of social progress, although of the same race of man. The Gauls were already a numerous and tolerably civilised people when, 2,000 years ago, they were invaded and conquered by the Romans, who in course of time succeeded in imposing upon them their own laws and language. The Italian and other subjects of Rome, no doubt settled in considerable numbers in France; but they could not have colonised it in the modern sense of colonisation, for there was no room for it in a country already peopled, and whom the conquerors certainly neither exterminated nor displaced. The majority of the Romans must have consisted of soldiers and camp followers, and necessarily they were few in numbers in comparison with the native inhabitants of a great country. They must have intermarried with the native inhabitants, and in time been absorbed into the mass of the population. The proportion of foreign settlers to the native inhabitants would, no doubt, be greater in this case than it was in India, since the facilities for emigration were much greater, and France but a small country with a small population as compared to India. France was afterwards successively invaded by several Teutonic tribes, the most recent of which gave its own name to the country and people. It is probable that the influence of the Teutonic invaders on the native inhabitants was still less than that of the Roman settlers, for they did not, like the Romans, succeed in substituting their own language for that which they found. All they did in this matter was to infuse a few Teutonic words into the existing language, just as the last conquerors of India mixed words of their own tongues with the native idioms of India.

Notwithstanding, then, the frequent infusions of foreign blood which have taken place in France, the certainty is that it has produced but little effect, and that at this day the French are, as to race, essentially the same people as their forefathers

the Gauls; just as the Hindus are not less Hindus after a small infusion of Aryan, Persian, Turkish, and Arabian blood.

Tribes must always have existed in France which, from the unfavourable localities in which they were placed, would be inferior in civilisation to the people of the open fertile plains; and we have the remains of them still in the mountaineers of Brittany and Gascony, where their retention of their ancient and rude languages bears sufficient evidence of their resistance to the inroads of civilisation. These people are to the French, and must have been also to the more advanced Gauls, what the wild mountain tribes of India are now to the cultivated Hindus.

Modern Spaniards have assuredly far more of the blood of ancient Iberians in their veins than they have of the blood of Celtic, Phœnician, Roman, Teutonic, or Arabian conquerors or settlers; for all these strangers came from great distances, consisted mostly of soldiers and male camp followers, and must have been few in number compared to the ancient and aboriginal inhabitants of so extensive a region as Spain. The people of the Basque provinces, still retaining their very original language, while the native idioms of the open parts of Spain have given way to an Italian tongue intermixed with Teutonic and Arabic words, are the representatives of the hill tribes of India.

Our own island affords another good illustration. Some two thousand years ago, the people of the more fertile parts of Britain were very far from being savages, although certainly barbarians; for they possessed corn and cattle, and the useful metals, and were tolerably clothed and housed. The Romans never produced in Britain the same social revolution which they had effected in France. They did not succeed, as there, in substituting their language for those of the conquered; and the mountainous parts of the country they never conquered at all, for from their position they would be difficult to conquer, and, if conquered, profitless to occupy from their poverty. The Roman occupation seems to have chiefly consisted of the legions and their followers, and to have been confined to a few military stations.

Four centuries of Roman domination, although it destroyed the native virtues of the Britons, seems to have ensured such an amount of peace and order as must have increased their material wealth and consequently their number; for the legions had hardly retired when the poorer people of the northern part of the island, and pirates from Northern Germany, thought it profitable to invade and subdue them. The Britons, then, when invaded by the Teutonic nations of the North, must have been

a comparatively numerous people; and such of the invaders as had to cross the German ocean in open boats hardly as respectable in point of safety and accommodation as Malay pirate prows, must in proportion to them have been few in number, and consisted, as usual, chiefly of the male sex. They continued, however, to pour in for several centuries by boat-loads, and their union and superior military prowess enabled them ultimately to substitute their own language, name, and institutions for those of the Britons, over all the fertile and easily accessible parts of the island. The mountaineers they never subdued; and in the Welsh and Highlanders of Scotland, still speaking their own original languages, we recognise the analogues of the wild tribes of India. The Scandinavian tribes who invaded Britain, made their way to it in the same manner as the people of Northern Germany, and, like them, must have been few compared to the natives.

The Norman conquest probably produced, physically, little or no effect on the mass of the previous population, already amalgamated as one nation under the common name of Angles or English. The invaders, already a mixed race themselves, consisted of a succession of military adventurers far more civilised than the conquered. They added to the civilisation of the conquered, and improved their language by an intermixture of a language which was but a recent acquisition to themselves; but the conquerors, comparatively few in number, could not have produced any appreciable effect on the blood of the previous inhabitants.

We, with our relatives on the opposite side of the Atlantic, are pleased to call ourselves, or are called by others, English or Angles and Saxons, as if we were all pure descendants of the Angles and Saxon invaders of the fifth and sixth centuries; whereas it is certain that the British blood in our veins is the paramount one, and that Britons would be a far more appropriate name in so far as pedigree by race is concerned.

But I may add that even America, such as it was when first discovered, exhibited a state of social existence similar to that which still obtains in India. Its inhabitants consisted of savage or wild tribes and of civilised nations, although here the proportions were reversed, the civilised being the few, and the wild or savage the many. Here the race was one and the same throughout, and therefore no claim of aboriginality could be made for any one party. The first attempt towards civilisation in America, and it was so probably everywhere else, began in open grassy plains, abounding in pasture, and therefore in wild animals yielding food and clothing for man, and probably also wild grain and roots adapted for human food. Such efforts

certainly could not have been commenced in forest-clad lands, and this for obvious reasons. These are always deficient in wild animals fit for human use, the only creatures abounding in them being monkeys, insects, and reptiles; no nutritious grasses, no esculent roots, and no wild fruits growing under the deep shade of forest trees. But independent of this primary obstacle, the clearing of the land of forest would be a labour beyond the skill and means of rude man, armed only with fire and stone axes. Hence come the primeval forests which still cover the best part of the American continent, and the extensive forests of India, which are probably coeval with the time when the earth first assumed its present form. On the contrary, the open forest-free plains would yield wild animal and vegetable food for man, while their fertile soils would be ready for the first rude attempt at husbandry. Those of America would yield only beasts of the chase, and their vegetable products adapted to future cultivation would be confined to such plants as maize, the manioc, and the yam, with such fruits, in tropical regions, as the guava, the pine-apple, the coco-palm, and the banana. The plains of India would be far more productive. Among their wild plants we should find rice, various millets and pulses, the yam, the banana, the sugar-cane, the mango, and the orange. Among its animals amenable to domestication, there would certainly exist, as they still exist in the wild state, the ox, the buffalo, the dog, the hog, the elephant, and even the ass; giving India in this matter a vast advantage over America, a priority which goes far to account for its earlier and more advanced civilisation.

The first efforts towards civilisation in America were consequently made by the mound-builders of the prairies of the Mississippi and Ohio, and by the builders of such monuments as those of Palenque, although both proved abortive, having probably been overthrown by some tribe of warlike savages. The next, and more permanent and ultimately more advanced civilisations, originated in the forest-free valleys of the Andes, and consisted of the civilisations of Mexico and Peru.

The mind may safely carry us back to a time in which the social state of India was similar to that of America, when the civilised tribes were few in number, and the wild or savage formed the majority. The Hindu is, beyond all question, a far more highly endowed race of man than the Red man of America; and civilisation would probably spring up earlier, at more points, and attain a higher maturity in India than it did in America. We may even point at the localities in which civilisation is most likely to have had its earliest seats. Separate and independent civilisations would probably spring up in

V.—*On the Archæology of Bronze.* By H. H. Howorth, Esq.

[*Read February 26th*, 1867.]

It is only a veteran in science who can safely deal in generalities. He is rightly privileged to sum up the results of long observation, and may justly suspect any intrusion into this province by those who lack his training, who have served but a short apprenticeship to the collection of facts, and whose words are of slight authority. To this class I belong, and with such credentials alone do I ask for your confidence. If there be nothing new in what I have to say, (and looking at the great names who have been before me on the same track it would be presumptuous in me to say there is,) the conclusions I have come to are hardly those of the orthodox school of archæologists; and if they lack the interest of being paradoxically original or ingenious, they are, I trust, free from the charge of being either obsolete or trite. I have been indebted to so many authorities, that to select any for special mention is perhaps invidious, but my acknowledgments are especially due to Sir John Lubbock; to Hodgson, the historian of Northumberland, who wrote a masterly paper on ancient arms in the *Archæologia Æliana;* and to the pages of the *Revista Minera,* and the *Revue Archéologique.*

Philosophy is beginning to endorse the guess of the poet, that oblivion is a myth, that every change and every step in the progress of the universe leaves a footprint behind it, and that we need but the key to enable us to read the history of the past in the ruins around us. Every day some new symbol is deciphered, and every day some rusty decaying trinket is made to tell us more about the earlier days of which we know so little, enabling us to see farther into the mists which hang about the origines of mankind—a mystery of surpassing interest, which will not be resolved by the *à priori* guesses and theories of monogenists and polygenists, but by slowly working backwards from what we know, and which may condone a new venture on a fruitful but supposed well-gleaned field.

Bronze is a compound, in varying proportions, of copper and tin, and objects made of it are found distributed over wide areas of the earth's surface, and through a long series of years. Its composition, the form and ornamentation of objects made of it, and the limits in time of its especial use for cutting implements, in so far as they throw a light on ethnology, are the

subjects I propose to treat of in turn. Copper is a metal of wide distribution, found in almost every primitive mountain chain, and easily accessible. The Egyptians worked mines of it in the stony Arabia at a very early period; the Phœnicians in Cyprus, Asia Minor, Spain, and the Mediterranean islands; the Greeks perhaps in Thrace and in Greece; the Romans in Tuscany, and generally in the footsteps of the Phœnicians and their successors, the Carthaginians. Its use was apparently coeval with, and confined to, its employment as a component of bronze, and objects made of it in its pure state are only found in exceptional localities. Its sources have not been the subjects of much discussion, nor do they seem to point to any important lessons.

Tin is a metal of more limited distribution in accessible quantities. Its chief sources now are Cornwall, Bohemia, and Saxony, the Malayan Peninsula and islands, and Australia. That these, or some of them, have *always* been its chief sources, has been too readily admitted. Tin deposits have been traced in the following places: Greenland, Sweden, Ireland, Cornwall and Devon, Gallicia, the Asturias and Biscay, Britanny, Bohemia and Saxony, Northern Africa, Siberia, China, Japan, Malacca, Sumatra and the adjacent islands, Australia, Chili, Peru, Mexico, California and Massachusetts. Siberia, Australia, and Greenland may be at once dismissed; specimens of tin ore from all three places may be found in the British Museum, but they are interesting only to the mineralogist, and the deposits have been discovered within living memory. On the American continent tin has been long worked. The Spaniards on their arrival found a currency of tin in use among the natives, similar to that described by the early travellers as also found in Sumatra. From Peru and Mexico have been derived objects of bronze which bear a very close likeness to those found in Europe; axes and chisels of this metal were in use among the races south of the Rio Grande on the arrival of the Spaniards, and many are said to be found among the mines north of that river; copper would seem to have been used at the same time, as is related by De Sotas, the Spaniards were told this was derived from a northern province called Chisca. However this may be, the primitive race who built the huge mounds and other monuments of the United States would seem to have been unacquainted with the use of bronze or iron, and Mr. Squiers says that from the structure and peculiarities of the copper used, American archæologists have conclusively shewn that it was derived from the deposits about Lake Superior; at the same time the obsidian of which so many objects were made must have been derived from

Mexico. The remoteness of the mines of Tasco whence tin was then derived was, perhaps, the sole cause of the use of unalloyed copper in the northern regions; the nearer we get to those mines the more abundant do our specimens of bronze articles become. Whence the knowledge of its metallurgy was derived, and when, is at present a riddle, and awaits the determination of the source, or rather the sources (for they would appear to have been many and various), of the other elements of civilisation which abound in Central America.

China and Japan, standing apart from the rest of the world, and with a history requiring a distinct criticism and point of view, are generally ignored in treating the currents of the world's progress. Many points of contact linking the east and west have consequently been overlooked, and antiquaries been unnecessarily startled by the discovery of Chinese seals in Ireland, and porcelain bottles in Egypt. An overland trade between Serica and the Eastern borders of Europe has existed, at least, since the time of Augustus, and, no doubt, much longer. About that period a new compound called orichalcum was introduced into Europe, a mixture of copper and zinc, in fact, our modern brass. It displaced in some measure the use of bronze at Rome. This compound has been known and employed in China from time immemorial, and there can be little doubt that it was derived thence by some caravan trader, much more probable than that it should have been an independent discovery. Pliny expressly names a metal he calls *ferrum sericum,* which may be brass, or may be the compound known as white copper or tuttenague, apparently the *ferrum candidum* of the author of the Aristotelian collection of wonderful reports, of which a present of a hundred talents was made to Alexander in India. This in a parenthesis. Kæmpfer, writing in 1690, says that Japan then produced a little tin of excellent quality. Its chief supply now is imported by the Chinese, who very probably introduced the manufacturing of bronze, which is, however, not very important, brass being chiefly employed. Grosier judges that mines of tin must exist in the interior of China from its cheapness, and by the missionary geographers. Karchin is mentioned as the richest in metals of the Mongolian provinces, containing *inter alia* mines of excellent tin. These sources, however abundant, are practically unknown to us, and we know that the seaboard, at least of China, is practically supplied from another quarter. According to Mr. Crawfurd, whose authority on such a subject is paramount, the Malacca coast, on its discovery by the Portuguese, was found crowded with Hindoo and Chinese craft. The travellers Louis Barthema, Mendez Pinto, and Barbosa all mention tin as an article of commerce in these

seas; and the calendar of the colonial series of state papers contains similar testimony, though it is strange that among the stores which English ships generally loaded before their departure from England some ingots of tin are generally mentioned, which would hardly have been the case if it had then been very cheap in the east. The area over which tin deposits have been found is limited to the peninsula of Malacca, the countries of Tavoy and Siam in the north, and Sumatra and the small islands between it and the mainland, more especially Banca. In this area it is found abundantly. Borneo and Celebes are mentioned as exporting tin, but the report is improbable. The best accounts of these mines I know will be found in *Newbold's History of the Straits Settlements*, and in a special report on them by H. W. Voysey in the eighteenth volume of the *Asiatic Researches*.

The mines of Banca are said to have been discovered in 1710 by the burning down of a house. They are now the richest and most productive in the world, except those of Cornwall. On the mainland, the Portuguese found tin being worked by Chinese emigrants when they first arrived. The Malays settled here in 1160, and no doubt supplied the Javanese and Sumatrans with it from that time. Before them the Arabs, from whom they borrowed their literature, and very probably their knowledge of metallurgy, were the chief merchants of Southern Asia, and in the seventh and eighth centuries their vessels swarmed on the whole southern seaboard of that continent. Among other articles they would seem to have supplied the Caliphate with tin, and a probable relic of the trade is traceable in the fact mentioned by Gmelin, that in his day (1723) the Persians derived their tin from India. It has been warmly debated whether the ancients knew of these deposits. It has been, however, pretty nearly decided that they did, but that they were not then generally worked, for we have no tradition of a *trade* in tin in these seas in any Greek or Roman author. Perak is said to be the Temala of Ptolemy, tima being the Malay term for tin; Calang, another place noted for its mines, is supposed to be the Malaion of the same author, and the Malaya Calam of the Hindoos. Calang is likewise a name for tin.

Diodorus says that India contained mines of many metals, among them tin, while Pliny expressly says that it did not. Stephanus of Byzantium, on the authority of the Bassarica of Dionysius, mentions an island Cassitira in the Indian Sea, where tin was obtained. Lastly, the Egyptian author of the *Periplus of the Erythrean Sea* states that tin was imported into the following places:—Port Avalites in Abyssinia, Cane on the Coast of Arabia, *whither it was brought from Egypt*, and two Indian

emporia, Barygaza at the mouth of the Nerbudda, and Bacare on the Malabar coast. Mr. Crawfurd, in criticising Dr. Vincent's commentary on the *Periplus*, seems to have overlooked the two former places. If tin was imported into Arabia from Egypt, it will justify the doubt of its being abundantly produced in Malacca at that day, and we may be confident that further west such supply was impracticable. The result of these observations is that China and India in ancient times (with, in later times, the Asiatic peoples who depended on the Arabs for their trade), probably derived their tin from the Malay peninsula. For the sources on which Assyria and Egypt, Greece and Rome, were dependent we must go further.

This will be the proper place to notice that Strabo mentions the country of the Drangæ, a people of Ariana, as producing tin; this statement has not been confirmed. Sullivan and Sestini, who describe copper, iron, gold, and silver, as found in the mountains of Armenia, do not name tin. The country of the Drangæ was probably on the caravan route to China, and the arrival by this route of some Chinese metals possibly gave rise to the report, but the question is of remote interest.

Buckle has taught us that the growth of civilisation is no hap and chance affair, that nations do not readily plant colonies, nor do those colonies thrive in remote and out of the way districts unless there are peculiar advantages in the situation. A rich mineral undersurface, or a focus of trade, will be found to explain every example of such prosperity. This being so, we may ask what was the especial cause of the power and wealth of the Etruscans, situated in a rugged country and extending up into the roots of the Alps? Their local mineral wealth was insignificant compared with Spain, and the competition with it would have been ruinous with such a resource only. Was their country then the focus of a trade unrecognised in later history and overlooked by modern inquirers. Such an explanation is not improbable. The source of amber was a mystery to the earlier Greeks, it would hardly have been so if it had been supplied from Sicily as some will have it. Hesiod and Herodotus connect it with the Eridanus; the German critics make this to mean a small tributary of the Elbe, or the Vistula; as likely to have reached the knowledge of those old writers, as the existence of America. Much more probable, surely, is it that by the Eridanus was meant the then western limit of geographical knowledge the Italian Eridanus, the Po, then in the possession of the Etruscans. We know that in Roman times amber was derived, as it is now, from the shores of the Baltic, and Pliny quotes the account of Pytheas of the islands where it was found. In the middle ages

there were several trading routes from the Baltic right through Germany to the Mediterranean, and there is very great probability that they were of the remotest antiquity. An embassy from the Æsti, who visited Theodore and brought with them a present of amber in the sixth century, no doubt went by one of these routes. At an early date a Roman agent is described as making the journey from Carnuntum, a frontier town of Pannonia, and returning again bringing with him a lump of amber weighing thirteen pounds. This, too, at a time when Germany was in a very different condition to what it was 400 B.C. Sir G. C. Lewis supposes that amber reached the markets of the old world through the Adriatic Veneti. Theophrastus connects it with Liguria, conterminous districts on either hand to the Etruscans. Now the Etruscans were, as all know, the chief amber workers of antiquity. Their tombs are rich in amber relics and every Etruscan collection is the same. Far up into Rhætia their colonies extended, and their situation meets all the requirements necessary to the importers of the precious mineral, and I am convinced that they were the real amber merchants of antiquity. If this be so, and we can postulate the extension of Etruscan influence to the Prussic shore of the Baltic, we may well believe that the Germany of Tacitus, which it is so hard to reconcile with the relics found in the ground, was not the Germany of an earlier day. But what has this to do with bronze? Why this: that the Etruscans were among other things the most skilful of the ancient workers in that metal, and they were not likely to have overlooked the materials for making the alloy if they were accessible in their neighbourhood. And what is the fact? Bohemia and Saxony abound in rich deposits of tin, which may be found described by Born in his travels through the Banat of Temeswar. These deposits have long been worked. Matthew Paris is quoted by Camden and Bechmann, as stating that a Cornishman who had fled for murder first discovered them, and caused the revenue of Richard, duke of Cornwall, to suffer in consequence. Paris died in 1259. Albertus Magnus, who died in 1280, says that tin was then dug up in many parts of Germany. Gmelin relates that the mines in the neighbourhood of Grauppen were discovered as early as 1146. These authorities shew at least that tin was worked here as early as the twelfth and thirteenth centuries. What happened in this part of Europe between the fall of Rome and the above date I do not know, nor do I know if the Romans worked *tin* here; but I fancy their hold on the country was hardly sufficiently secure till the time of Trajan, when we find Zalatha the seat of the upper court of mines, which is attested by many inscriptions containing references to the

Procuratores Aurariarum Daciæ and the Collegia Aurariarum. I am not sure that tin was among the metals here sought by them, nor do I know much of Roman economy at and after this period, but I can hardly suppose that the owners of Cornwall and Spain would have ignored these deposits. At an earlier day Tacitus tells us the Germans worked no mines, but the Germans were barbarous intruders into this area: the Boii, whom they displaced, and who were intimately related to the Helvetii, were, we may well believe, a more polished race; but at the date to which I am coming I doubt there being any Boii at all here (the reasons for this doubt may appear in a future paper), and I am satisfied that the conclusions of archæologists must be sustained, and that a people of very high relative culture then inhabited Central Europe. At this date we have some evidence that mines were worked in South Germany, though it is still fragmentary. In 1865, M. Raumsauer, the director of the salt mines of Hallstadt, communicated to the French Academy a paper on some discoveries made by him at Rudolfsthurm, a castle in a valley filled with excavations, in which he opened nine hundred and sixty-three tombs of the bronze age, containing an extremely rich assortment of bronze relics, amber collars, and glass beads and vases, and in the mines themselves and among the old galleries ancient tools and bronze picks, a fibula, woollen stuff, and chamois leather. I have only met with a very meagre account of this discovery, and further evidence would be very desirable. Among the ancients, testimony to this mining is hardly to be expected, as the district was beyond the reach of those who have left us any accounts of such subjects; but I may say that Scymnus names two islands at the head of the Istrian Gulf as producing tin, and, if there was any foundation for the report, it must have been that a trade then existed in tin with Germany. We are told that in the earliest times the Ligurians abounded in brass, and we can well imagine an exchange of bronze or tin for the amber of the Baltic existing to the north of the Alps. That bronze was cast in Denmark itself (which would hardly have been the case if the tin had to come from Britain), we know from the number of moulds still found there.

Sweden contains deposits of tin which may have been worked in ancient times. The Finnish women use tin thread and spangles to embroider their clothes with, and have done so apparently from an early date. The Finns are good metallurgists, and forge iron in their little furnace; but the scarcity of bronze weapons in Sweden, like the similar scarcity in Russia, seems to shew that in ancient times the mines of the former country and the Ural Mountains were unworked.

I am not prepared to say whether tin was anciently worked in Northern Africa or not. Deposits of it are found on the banks of the Mina, or Minah, and have been known since 1640. The district was so well settled by the same race who colonised Spain that it is not likely they would escape observation. The Atlas is, however, at present practically a *terra incognita*; not so the land across the Straits, the Mexico and Peru of the ancients, whence the Phœnicians, Carthaginians, and Romans, as is well known, drew their chief supplies of gold, silver, iron, and lead. I purpose shewing that to this list must be added tin.

Tarshish, the best opinions now agree, was at first a correlative term with the west. Thence the eastern markets were supplied by the Phœnicians with many luxuries, among them with the bedil stone, the cassiteros of the Greeks. This is confirmed by the legends which tell us that Midacritus or Melcarthus, the Tyrian Hercules, was the first who introduced it. Gradually, as the west became better known, the term Tarshish became more fixed and limited in its meaning, and no doubt eventually it is to be identified with Tartessus, the Mart at the Pillars of Hercules.

The Greek knowledge of the west in early times was entirely derived from foreigners. Colæus Rhodeus, about 400 B.C., is said to have been the first who visited Tartessus. The outer ocean was guarded jealously, and the best authorities seem to be now agreed that even Pytheas of Marseilles was but a retailer of the second-hand stories current at Gades. What is told us, therefore, of the west by the earlier Greeks, and this includes Herodotus, who speaks on the subject with characteristic caution, must be received *cum grano*. It was the Tyrian merchants, who sold toys to the heroines of Homer and carried the world's gossip to Thebes and Babylon, who monopolised the secret; the busy market loving first-cousins of the Jews, who, no doubt, flocked to their maritime cities and colonies, the bullion dealers and pedlars of all time. That Tarshish was the western market for tin in the earliest times has been generally admitted; how it came there, and whence, have been subjects of much controversy. Fleets of penteconters labouring with equal skill and pertinacity from Gibraltar to Falmouth have received considerable attention from antiquaries, and have not been extinguished by the cruel criticism of Sir G. C. Lewis. I shall not quote from his analysis of its ridiculousness, nor insist on the small probability of anything save an occasional coasting craft venturing on such a voyage. We know that in Roman times the chief track was from the south coast of England to the ports of the Veneti, and a dim tradition speaks to us of a

route in earlier days from the lighthouse at Coruna to the tower at Belerium. Granting that the sea voyage is impracticable, the tin must have come to Tartessus, one of the Tyrian or Sidonian ports on the Andalusian coast overland, and we are told that it was brought down the river Batis.

On examining the condition of the interior of Spain then, we find it very different from the normal Spanish type; apparently very thickly peopled, apparently studded with colonies, and traversed with roads, not the Spain of to-day with its more than half-savage wildernesses. In every corner where a trace of metal is found, from the mountains of Granada to the obscure corners of Traz os Montes, Algarve, and Biscay, heaps of scoriæ, unchronicled antiquities, and labyrinths of ancient workings, exist. I would refer all who would deem me exaggerating to the pages of the *Revista Minera.* Spain was then, in fact, the great smelting house of the world.

To discriminate the relative ages of the different ancient workings is a task of no easy nature; I doubt, indeed, whether it be possible to do so accurately with our present materials; rudeness is but a poor test of antiquity, and, where a monotonous sameness prevails in the type of working, it is hard to frame a chronology from the progressive character of the works. Most of the Spanish mines seem to have been worked by the Romans; but many of them, especially in Biscay, contain remains which are at least conventionally of the higher date when stone hammers and wedges of stag's horn and wooden picks and shovels were the ordinary mining tools. In the Asturian mines articles are said to have been found with Phœnician inscriptions upon them. The dearth of antiquarian interest and testimony among modern Spaniards makes the slightest evidence of perhaps greater value. If the collections which are said to exist at Madrid were published, there are not a few riddles in ethnology which would be resolved; until then our statements have little more authority than guesses.

Tin is found in two species of deposit: in veins and lodes; and in small lumps and pebbles, mixed with gravel, and known as stream tin. In the East Indies, the latter deposits alone have been worked; in Europe, from very early times, both species have been mined (Pliny and Strabo). Stream tin is nearly always associated with gold, and it may have been in searching for the latter that the former was first noticed. However this may be, there can be little doubt that, in ancient times, gold washing and tin washing were carried on in the same places simultaneously, and ancient authors tell us this was the case in Spain. Pliny, speaking of tin in Gallicia, says:—"It is also found in the gold mines known as Alutiæ; the stream of

water which is passed through them detaching certain black pebbles mottled with small white spots, and of the same weight as gold; hence it is that they remain with the gold in the baskets in which it is collected, and, being separated in the furnace, are then melted and become converted into tin" (Pliny, book XXXIV, ch. 47, Bohn's translation). The vast excavations which remain in the north of the Peninsula are often associated with the mining of gold by the natives; their true character has been ascertained by Schulz, the director of the Spanish school of mines, and others.

I will now quote some descriptions of these excavations.

Murphy, in his *Travels*, speaking of Northern Portugal, says: —"Mines of fine tin may be seen in Amaranté, Bonzella, St. Pedro do Sul, Belmonte, Bragança, and Vizeu; there is also one in the district of Monforte, of which Pliny makes mention (?). . . . . The mines of the provinces of Nimho and Traz os Montes are certainly the most stupendous works of the ancients existing in Portugal; were proper surveys made of them they might throw some light on the manner of forming mines and conveying minerals through subterranean passages. . . . . In the province of Traz os Montes, in the district of Alfarella, is a place called S. Miguel das tres Minhas, wherein are seen three immense mines generally supposed to have been worked by the Romans. The mouth of the largest, which has been cut through the rock, is a mile and a half in circumference, and upwards of five hundred feet deep; at the bottom it measures two thousand four hundred by one thousand four hundred feet. . . . . A road is hewn through the rock at the height of seventy feet, large enough to admit a cart. In the adjoining valleys are seen heaps of rubbish which it is natural to suppose had been dug out of the mine. The mountain is a labyrinth of passages." These Murphy describes. Again, "near the village of Seixo, in a place called Val de Covas, are seen three caverns, each twenty feet high, their length and breadth (and I may say age) may be inferred from their containing olive plantations. The inhabitants generally suppose them to have been gold and silver mines opened by the Romans, and they pretend to shew the vestiges of a canal by which the ore was conducted to the river Orseira, three miles distant."

When in Portugal in 1857, I heard in Lisbon that among the hills of Braganza, and while exploring for tin, the workmen had come across some old workings in which were found many ancient tools, including wooden spades, such as are well known to Cornish antiquaries.

In the *Descripcion Geognostica de Gallicia*, Don Guillermo Schulz, the Director of the Spanish School of Mines, says:—

"In the primary strata of Gallicia we have not discovered any precious metals except tin, of which it appears we have abundance in many places." Among others he mentions Vilar de Ciervos, a league and a-half south-east of Monterey; Arincelos dos Leguas, to the north of the same place; the mountains of Penanta and Ramilo, two leagues to the east of Viana, in the jurisdiction of Montes, in the province of Ponte Verda; at Couson de Avion; at Mount Balsidron, south-east of Rivadavia, and at Porto Mouro, on the right bank of the Sambre; and among them several ancient mines which existed from time immemorial, as those of Tajeiros Vellos, in the parish of Azumara, four leagues north-east of Lugo.

From the *Geological Description of the Asturias* by the same author, published in 1858, I take the following. "To the east of the church of Salabe, on the coast, two leagues east-north-east of Rivadeo, there is in the primitive rock an ancient exploration of tin of enormous dimensions chiefly open to the sky, and pierced with subterranean galleries for drainage." . . . Again, "Useful and precious minerals no longer abound in the western part of the Asturias, as they were worked with incredible zeal in remote antiquity, and as is shown by the grand and numerous ancient works," on which M. Paillette has published a very interesting memoir in the ninth volume, second series, of the *Geological Bulletin of France.* "The before-mentioned immense working at Salabe has an outlet for water, two leagues and a-half in length, and numerous galleries emptying into the sea. Their bottom was occupied up to 1830 by several lagunes; when these were drained, there appeared repeated and considerable layers of charcoal intercalated with layers of clay, curious examples of smelting, really historical, which also occur in other ancient mines in the Asturias," (and, I may remark, in Malacca, where almost identical structures are described by Newbold as now used by the Chinese smelters.) "One of these lagunes was of great depth and difficult to drain, and we are of opinion that this, from special peculiarities, was of the age of the Phœnicians, and had for its object the extraction of tin. The ancient mines are distinguished by their ingenious drains to convey the running water to the highest points of the mines. They are looked upon with veneration by the inhabitants of these mountains, who style their makers simply the ancients." He refers at some length to similar mines at Monte Furada and Villa de Salas, and mentions the recent rediscovery of tin lodes close to the ancient workings at the latter place.

I might go on to quote largely from the paper before-mentioned (and of which a translation may be found in the *Revista*

Minera) on the distribution of these immense workings, but will content myself with one interesting passage. "Among all the hilly districts of Lusitania are found many tin mines. In all the editions of Agricola is found a description of a small grinding mill, with cylindrical blades, which serves the Lusitanians for breaking the ore. These same mills still exist in that part of the province of Zamora bordering on Portugal, in places comprehended in the ancient Lusitania. The contrivances are traditionally very ancient." He then goes on to describe their structure. They are, in fact, the Egyptian screws mentioned as used in mining among the Celtiberians by Diodorus. These extracts will suffice to shew the greatness of the tin deposits of Spain, and also the extent to which they were used by the ancients. Granting that they are correct, is it probable that the ancient miners would in the earliest times go beyond the sea for their chief supply? Assuredly not. We have shewn from their ruins how much these mines were worked, but our evidence is not exhausted. Posidonius speaks of tin as worked by the barbarians beyond Lusitania. Avienus, in the Ora Maritima, describing certain places on the western coast of Spain, mentions Mount Cæsius, and makes it the origin of the Greek term Cassiteros. Eustathius, Scymnus, and Stephanus of Byzantium, refer to the Bætis as the river down which tin was carried to Tartessus; Strabo speaks of Spain and Lusitania as sources of tin, and Pliny, who was a procurator in the former country, and therefore likely to know, says, speaking of tin:—"It was called by the Greeks cassiteros, and there is a fabulous story of their going in quest of it to the islands of the Atlantic, and of its being brought in barks made of osiers covered with hides. It is now known that it is a production of Lusitania and Gallicia." This passage may be a slight exaggeration. It has been very conveniently ignored by patriotic Cornishmen; and is, I may claim, even granting that it may be exaggerated, strong evidence in favour of my position, which is, that in early times Spain was the main source for tin.

It is not to be doubted, and in fact we have ample evidence, that the hardy race of Iberians who peopled the Peninsula had in very early times crossed or extended beyond the Pyrenees, and beyond the limits of Aquitania right up to Finisterre, and that they probably discovered and worked the tin mines of Brittany, which, though not very extensive, are productive and have a high antiquity; nor that, content with the mainland, they should not have ventured out towards the islands in the north, and have settled there in considerable numbers; nor that their Tyrian masters, or at least their civilisation, may not have followed after them; nor, lastly, that the tin mines there should

have been unoccupied, while the local wants were supplied from the distant resources in the south. All this is probable and more. It is not to be doubted that a kindred race, employed in a kindred industry, should have kept up a perennial intercourse with its mother country. In a paper I had the honour of reading at the British Association, I brought together many proofs of the large infusion of Iberic that there is in some Celtic languages, and other evidences are accumulating to shew that, in early times, Britain was ethnologically a mere outlier of Spain, and indeed, it is no new discovery. Dionysius Alexandrinus expressly says that the Hesperides, where tin was obtained, were inhabited by Iberians. Strabo describes the costume and customs of the inhabitants of the Cassiterides as identical with those of the Iberians; Tacitus refers the black haired Silures to a Spanish origin; we all know the place that the Spanish Milesians fill in Irish legends, and how the Welsh connect their kindred the Lloegrians with the Loire. In order to understand the prominence which the British tin mines have acquired, we must digress a little.

The gradual extinction of the importance of the mother cities on the Syrian coast, and of their immediate colonies, is an obscure question. The Assyrians sapped their strength, and as it faded away, so grew the power and wealth of Carthage and its colonies. Medina, Sidonia, and Tarshish, gave way to Carthagena, Gadir, Saguntum, and other cities. Carthage thus became the real master of Spain, getting thence food and metals, and recruits for its armies. The change of masters was, no doubt, slighter in kind than in degree; such change, however, does not seem capable of discrimination now. Up to about 450 B.C., the Mediterranean west of Sicily was practically unknown save to the selfish monopolists of the Cyrenaica. About this date, apparently, the Greeks began to contest this monopoly in Sicily and elsewhere, and their colonies invaded the sea-board of the west. They followed fast on a wave of a kindred race which was advancing overland. Wherever this race reached a coast, there were Greek colonies planted; this race was the Celtic, and thus the Phoceans came to found Marseilles among the Ligurians, as far as we know, a Mongrel race of Iberians and Celts, and the frontagers of both peoples. The founding of Marseilles would affect the prosperity of Gades in a manner hardly sufficiently recognised; to it the trade of Gaul would be diverted, and more than this, the Celts who were advancing in that country, were advancing in Britain also, and soon *its* attraction would be to the Gallic rather than the Spanish main, and such attraction would carry with it trade and commerce, and thus a spur

of competition be given to the mines there; and thus the navigation between the southern coast of England and the ports of the Veneti, which was so prosperous in later days, would commence. And to this period we may assign the beginning of that overland traffic in tin of which Diodorus has left us an account dear to Cornishmen. Carthage might still supply the east, the Etruscans still supply their own wants and those of Italy, but the Greek Islands would receive theirs from the traders of Marseilles, who would report the rich islands of the west, and from their reports geographers and historians learnt the facts which they relate to us.

Presently both Carthaginians and Greeks were ousted by the Romans, whose advent as the masters of the world and the very type of colonisers, no doubt gave a great impetus to mining operations. Roman roads, Roman coins, inscriptions, and monuments, saturate the peninsula, especially the mining districts. Masters of both Spain and Britain, these two countries would resume their relative importance as sources of tin; the latter probably supplying little more than a local demand. This we may gather from the statement of Pliny already quoted. Marseilles would seem, however, to have become the focus of trade for both countries, and we know that tin came to be looked upon as a Celtic commodity, and that among the Gauls the Bituriges and the inhabitants of Alesia were especially celebrated as tin platers. The vessels described by the ancients as thus plated were probably the lineal ancestors of a similar ware still used by the Portuguese and Spaniards to import distilled water from Malta, and called stagnone.

Having shewn how Britain became notorious as the source of tin, I pass to the consideration of its deposits. The Scilly Isles, as the traditional Cassiterides, have puzzled inquirers from the absence of any but the slightest traces of tin or of its mines there. The deposits may have been exhausted, or the real tin islands may now be submerged, or they may really have been a conventional name for the mainland of Cornwall and Devon, or they may have been a conventional name for some source in Ireland. It is strange that, when spoken of with any precision by the ancients, they are generally placed off the coast of the Artabri. If by Cassiterides was meant anything more than the rocky islets on the Spanish coast, this description applies best to Ireland. But I believe no deposits of tin are known on the south or south-west coast of that island opposite to Spain; but they are known in another neighbourhood, namely in the mountains of Wicklow, and their produce may have been exported from some port on the south coast. This is a conjecture merely; the mines of Wicklow are stream

washings, and are similar to those of Spain in containing a mixture of gold and tin stones, and I have little doubt that much of the gold fashioned into ornaments which are so commonly found in Ireland was derived hence. I have no less doubt that from here was also obtained the tin needed to supply the great demand of the workers of the so-called bronze age in that island, so prolific in remains of this alloy. These mines of Wicklow are not very productive now, though it is, perhaps, more from being neglected than from their poverty, since Mr. Mallet, who is cited by Mr. W. Smyth, has found ore containing three-and-half pounds of tin to one hundred and fifty pounds of sand, being a greater proportion than is known anywhere else. There are very ancient workings, and they are described as precisely similar to those found in Spain, but they seem to have been almost neglected by archæologists.

In Cornwall, at many places described by Polwhele and others, there are many traces of ancient mines, among which have been discovered numbers of Roman coins and tools, but little of earlier date; the only exceptions being, perhaps, a bronze figure of Apis, described by Mr. Birch in the *Archæological Journal,* and some stone mauls and other primitive tools. The works are not connected, however, with Rome in the local traditions. In the quaint words of Carew, "They maintaine these works to have been very auncient, and first wrought by the Jews with pickaxes of holme, box, and hartshorne. They prove this by the name of those places yet enduring, to wit, Attall Sarazin, in English the Jewes offcast, and by those tools daily found among the rubble of such workes; and it may well be that as akornes made good bread before Ceres taught the use of corne, and sharpe stones served the Indians for knives untill the Spanish brought them iron, so in the infancie of knowledge these poor instruments, for want of better, did supply a turne. There are also taken up in such works certain little tooles heads of brass, which some terme thunderaxes, but they make small shew of any profitable use. Neither were the Romans ignorant of this trade, as may appeare by a brass coin of Domitian's found in one of these works, and fallen into my hands; and perhaps under one of those Flavians the Jewish workmen made here their first arrivall."

Mr. Tonkin remarks on this, (quoted in Polwhele): "These old works are also called by their more ancient name Wheal an Iethewon, the works of the Jews, whose aqueducts, levels, etc., are to be seen all over those parts of the country where tin is found, particularly in Piran Sands and St. Agnes."

The amorphous lumps of tin occasionally found in the workings, and of which the Jermyn Street museum contains two specimens, are in popular imagination relics of the same race.

Whether the Jews really worked these mines in Roman times, and whether their connection with Cornwall was handed down from their kinsmen the Phœnicians, is an inquiry of interest, but at present apparently unapproachable. It is clear that in the middle ages the Jews had almost exclusive possession of the mines, and a monopoly of the trade in their produce. That this must have been great after the Moorish and Gothic wars in Spain had closed the mines there, which we know that they did, we may gather from the revenues of the earlier Earls of Cornwall.

The ancients also worked many mines in Wales and Anglesea, chiefly copper and silver; and articles of stone and stags' horn, often associated with ante-Roman times, are not infrequently found. The silver mines of Cardigan, I would suggest, gave their name to the Silures, Sillera in Basque, *i.e.* Iberic, being the well known name for silver, and probably the origin of our own word.

These facts are all eloquent of an earlier race than the rude tribes described by Cæsar, a race which probably left to the South Britons that legacy of a superior culture which he assigns to their proximity to Gaul, a race of smelters and miners who occupied the west until an invasion of barbarians similar in type and in the results of their handiwork to those who, in the fifth century, overthrew the Roman empire, but who arrived eight or nine hundred years earlier; a race who have marked an archæologic era—the bronze age.

I have now exhausted the possible sources of tin; and the result of a tedious marshalling of evidence, leaving out secondary and unimportant supplies, is, that Britain in early times furnished a very limited demand for tin; that Spain was then the grand source of the metal; that the Etruscans and the nations north of the Alps were supplied by the mines of Bohemia and Saxony, and that the mines of Malacca were practically unworked by the ancients. This conclusion is purely tentative; but, in being so, it shares the fate of every archæological and historical conclusion, and I venture to hope it is supported by the greatest probability.

Advancing from this conclusion, we may be assured that, when the corroded bronzes which are found in the earlier tombs of Egypt, Assyria, and Etruria, were placed there, the northern rampart of Spain was well known to, and the intervening seas traversed by, races of men hardly to be recognised in the painted imbeciles stereotyped in popular history as our ancestors.

Tin in its separate state is too soft to be of much use in the arts; and beyond a few doubtful relics, such as the tin cups

washings, and are similar to those of Spain in containing a mixture of gold and tin stones, and I have little doubt that much of the gold fashioned into ornaments which are so commonly found in Ireland was derived hence. I have no less doubt that from here was also obtained the tin needed to supply the great demand of the workers of the so-called bronze age in that island, so prolific in remains of this alloy. These mines of Wicklow are not very productive now, though it is, perhaps, more from being neglected than from their poverty, since Mr. Mallet, who is cited by Mr. W. Smyth, has found ore containing three-and-half pounds of tin to one hundred and fifty pounds of sand, being a greater proportion than is known anywhere else. There are very ancient workings, and they are described as precisely similar to those found in Spain, but they seem to have been almost neglected by archæologists.

In Cornwall, at many places described by Polwhele and others, there are many traces of ancient mines, among which have been discovered numbers of Roman coins and tools, but little of earlier date; the only exceptions being, perhaps, a bronze figure of Apis, described by Mr. Birch in the *Archæological Journal,* and some stone mauls and other primitive tools. The works are not connected, however, with Rome in the local traditions. In the quaint words of Carew, "They maintaine these works to have been very auncient, and first wrought by the Jews with pickaxes of holme, box, and hartshorne. They prove this by the name of those places yet enduring, to wit, Attall Sarazin, in English the Jewes offcast, and by those tools daily found among the rubble of such workes; and it may well be that as akornes made good bread before Ceres taught the use of corne, and sharpe stones served the Indians for knives untill the Spanish brought them iron, so in the infancie of knowledge these poor instruments, for want of better, did supply a turne. There are also taken up in such works certain little tooles heads of brass, which some terme thunderaxes, but they make small shew of any profitable use. Neither were the Romans ignorant of this trade, as may appeare by a brass coin of Domitian's found in one of these works, and fallen into my hands; and perhaps under one of those Flavians the Jewish workmen made here their first arrivall."

Mr. Tonkin remarks on this, (quoted in Polwhele): "These old works are also called by their more ancient name Wheal an Iethewon, the works of the Jews, whose aqueducts, levels, etc., are to be seen all over those parts of the country where tin is found, particularly in Piran Sands and St. Agnes."

The amorphous lumps of tin occasionally found in the workings, and of which the Jermyn Street museum contains two specimens, are in popular imagination relics of the same race.

figured in the *Philosophical Transactions*, vol. li, we know it (as used by the ancients) only combined with copper in the form of bronze. Bronze is of too complex a metallurgy to have been with any probability a separate discovery of isolated peoples. Its knowledge involves a wider experience than the mere light of nature would afford; and, judging from modern analogy, which is safer, at least, than *à priori* guessing, it was probably disseminated from some centre of civilisation. What this centre was is our next inquiry, and our evidence is of two kinds. First, that of etymology; next, that derived from a comparison of the forms and ornamentation of bronze objects: evidence which seems to me to give a very plausible answer, namely, that the Phœnicians were, if not the discoverers, the chief artificers and dispensers of bronze. To propose the Phœnicians as the solution of an archæological riddle, when the pretentions of over-patriotic Irishmen and the descendants of "Ancient Britons" have made the very name ridiculous, is perhaps somewhat presumptuous. Yet, before the world entirely obliterates them, and comes to view them as the archæological "Children of the Mist", it will be well to recall how great a space they filled in the history of the Old World, and, while eschewing any genealogical vagaries as to connections of race, to examine the probabilities of a connection of our earlier civilisation with theirs.

Pliny always refers to tin under the name of plumbum album. Stannum, which became its name in later times, when the knowledge of its metallurgy was more advanced, is used by him, together with galena and argentum, as the name of certain products of lead refining. All three terms were apparently imported, and have no special meaning in Latin. *Tinn* in High German, *tenn* in Swedish, *tin* in English, *étain* in French, *stean* and *staoine* in the Celtic dialects, *estagne* in Italian, and *estaño* in Spanish and Portuguese, are all forms of the same word *stannum;* and the two latter, containing the affix *e*, connect the whole with the Basque term *estanua.*

Galena is perhaps derivable from the old Basque root *gal* or *galea*, which means to lose or dissipate, and may be compared with similar names given by the German miners to the minerals cobalt and nickel; and argentum from *argina, argi* meaning bright, and having the same signification as *cillara*, which I conceive to be the etymology of the English word silver. The Basques, it is superfluous to state, are the remnants of the ancient Iberians, who peopled Spain, as far as we know, in the earliest times, and more, who by Wm. von Humboldt were proved to have formed the substratum of the population of Western Europe generally.

The Greek name for tin, *kassiteros*, and the Sanskrit *kastira*, are both derived by Bochart from the Arabic *kasdir* and the Aramaic *kastira*, which are said to be connected with the root *kash*, to sparkle. The Talmudists translate the word *kasterion*. These Semitic equivalents of the word land us at the Phœnicians, who no one now doubts spoke a language but slightly differing dialectically from Hebrew, and consequently distinctly Semitic. In Persian the names for tin are *kalai*, *resas*, and *arziz*, which are said to be all Arabic; perhaps *kalai* is Turkish. The Indian and Sanskrit name for tin is *tirane*, which is derived from *tir* (meaning the extremity of the world) by an able writer in the second volume of the *Asiatic Transactions*. The Malayan names for the substance, Mr. Crawfurd tells us, are imported from Sanskrit, and consequently from the West. The English word brass, Anglo-Saxon *braes*, Gaelic *prais*, is connected with the German *brasen*, to burn, Icelandic *brasa*, to solder, Spanish *brasa*, embers, whence *brasero*, which are most probably again derivable from the Basque *brasa*, *braserua*, *brasoncia*. I have not much hesitation in making the Basque *broncea* the common ancestor of the English and French bronze, Italian *bronzo*, Spanish *bronce*. These etymologies, limited as they are, point to the Phœnicians and their peculiar clients or dependants the Iberians, on whose every shore they were to be found, as the probable disseminators of tin and bronze. A confirmation of this position is derivable from a criticism of the ornaments and forms of bronze objects.

One fact which has puzzled antiquaries not a little, is the *apparent* annihilation of nearly every relic of distinctly Phœnician workmanship. If this people were what tradition says they were, where are their remains? we are constantly asked; we have their alphabet, and a small vocabulary in a few inscriptions, a few coins, and what else? In Babylon and Assyria, in Greece, Asia Minor, and Italy, we are at no such loss for evidence of ancient greatness; but where are we to look for Phœnician types? I say everywhere. Tradition and the firmer records of history speak of the Phœnicians as brass workers and merchants, not only at Tyre, but at Jerusalem, at Nineveh, in Greece, and in Northern Africa. If we find a common type in use in all these countries, we may assuredly assign it to the only race we know who were cosmopolitan enough to have introduced it—to the neglected Tyrians and Sidonians. Along the shores of the Mediterranean, the earlier relics, which betray a certain rude, uncouth, artistic feeling, are thrown together into a huge bag of mystery, and labelled archaic. These, it has not been disputed, maintain a family likeness in Italy, the Greek main and islands, and Asia Minor. Archaic! mysterious word, how

would Phœnician sound! We all know the riddle, though few appreciate the answer, of the travels of Hercules in the West, the hero whom the Greeks avowedly borrowed from the Syrian coast, where he was known as Melcart: the Greek lore about Cadmus and others: the Etruscan and Roman traditions about their ancestry in Lydia and the Troad. But these are only traditions, and the times are not prone to believe in such evidence, though why the times should arrogate peculiar shrewdness therefore it is difficult to say. It will not, perhaps, cavil at the evidence of the monuments. Ante-Roman art in Europe seems distinguishable into two well marked eras—an early, and a developed form. The latter, influenced no doubt by Egyptian models, received and possessed a distinctly peculiar local colour from every distinct race among which it grew. Its beginning may, perhaps, with considerable probability, be fixed to the period when the Greeks emancipated themselves from Eastern control by the Persian wars. Art and literature then sprang into a new and advanced position; and the wave, flowing through the colonies of Magna Græcia into Etruria, inaugurated there doubtless the era of those art-bronzes and other works, and especially the fictile ware, which show so great a common feeling with those of Greece, and whose mythological ornamentation may be said to be identical; which era has generally, however, been dated too high, and which certainly extended into somewhat late Roman times. This emancipation of Greek and its dependent art from the rigidity and conventionality of its early forms, about the time of Pericles, has a very close parallel, and one pointing to similar causes, in the revival of art in Italy in the fourteenth century. The archaic forms that preceded the one, and the Byzantine stiffness that preceded the other, being singularly correlative. The effect of the revival in Italy on the art of Spain and France and Flanders, countries which had commercial relations with it, are no less illustrative of the similar influence which a rigid induction would establish between Greece and Asia Minor and Etruria. With this advanced art, which arose after the decline of Tyre, I have nothing to do. It is with the archaic alone that I would deal. Like that of Byzantium, it would appear to have been the degraded descendant of a better type, and, like it, to have consisted in monotonous repetitions of rude models, rather than in imitations from nature, or in original inventions. Its crudity is most apparent in its treatment of human and animal forms.

If we take the earliest specimens of Greek art that we know, such as the Lycian sculptures discovered by Sir C. Fellowes, or the remains found in Rhodes and elsewhere, and compare them with Assyrian examples, the resemblance will be found very

striking. The earlier Greek armour and the latest Assyrian (especially in respect of shields and helmets) are almost identical. The griffons, and lions, and mythologic monstrosities, so characteristic of the one, will also be found amongst the others; the type of face, even, is strikingly similar; and, if we go beyond Greece to Etruria, we shall find the resemblance still more marked. The bronze bowls with their embossed friezes, the amber work and ivories, in form and subjects (here and there shewing traces perhaps of an Egyptian influence) are in the main almost stereotyped copies of what are found in Mesopotamia. If we cross the Alps into Germany and Gaul and Britain, our evidence is no less marked. A great authority has objected to me, that these embossed figures, so common on, and characteristic of, Eastern and Etruscan objects, are wholly wanting north of the Alps. I would answer this objection by saying, that such ornamentation is confined to a certain class of objects only in the former districts, and such objects are absent (I was about to say necessarily) from the latter. The arms, the collars, the beads and personal ornaments, are not so decorated. It is only the pateræ and bowls, *objets de luxe* hardly likely to have been exported to, or appreciated by, the peoples of the North. When the backwoods of America were supplied with axes from Birmingham; when the traders of the Slave Coast introduced coloured beads, which must now be scattered over Central Africa; when the eastern merchants imported into Scandinavia the hoards of Cufic coins now found there; we do not find them supplying vases of Sevres, or Italian bronzes, or damascened bowls to the same countries. It is only the luxuries and ornaments which are likely to be appreciated by a people of inferior culture, and the weapons and tools that are absolutely needful for their warfare with their neighbours and with nature, that become the objects of commerce with them, and whose manufacture is eventually introduced. The connection between Etruscan and South German and Swiss bronzes, has not escaped (nor could it well) the notice of northern archæologists. The armlets, the gold trinkets and fibulæ, the celts, palstaves, and swords, are almost identical; and in their minute ornaments in the zigzags, the concentric circles, the double spirals, etc. (which distinguish the pottery of the same period no less than the bronzes), are in Germany and Britain very close copies of the similar ornaments on Etruscan mirrors and brooches, on early Greek marbles, and on Assyrian remains. The daggers and leaf-shaped swords, which are everywhere of so constant a shape, and which may be found figured on the vases and coins and marbles of the south and east, also betray an unmistakable common origin.

In vol. xxxvi of the *Archæologia,* may be found a most interesting paper by Mr. Kemble, on a number of bronze remains found in a tumulus at Schwerin, among them a model of a waggon with strange figures upon it. Similar ones have since been discovered in Styria and in Northern Italy. These are undoubtedly Etruscan; and Mr. Kemble, who fancies them to be the remains of a Gallic people who lived on both sides of the Alps, confesses that he is obliged to assign them to the handiwork of the Tuscans. Similar grotesques are commonly found in Sardinia, and many are figured in De la Marmiora's work on that island, and they are not unknown in Ireland. Bronze helmets of a conical shape, like those used by the Assyrians, have also been found in Germany, and I have little doubt that many unexplained and mysterious bronze articles found in Ireland, need but careful comparison with those in the museums of Tuscany, to respond in no hesitating manner to the question of whence they came. In January 1849, a bronze celt, one out of eighteen or twenty found in a coal mine in Andalusia, was exhibited at the Archæological Institute by Mr. Pratt. In his remarks on it, he said ancient objects had been found in the mines of Asturias, bearing Phœnician characters similar to those found on the coins of Gades. They are now preserved at Madrid. Were these objects accessible, they would perhaps finally dispose of the whole controversy. As it is, circumstantial evidence is accumulating rapidly in support of my position, that the Phœnicians, who gave Italy and Greece their letters; who it appears more clearly every day were the channels by which the mythology of the Euphrates was transferred to the Ægean; to whom we can now trace so many myths, supposed formerly to have been Grecian home-spun; whose chief city was the Birmingham of the ancient world; were also the bronze merchants and manufacturers of antiquity. The focus of their influence was the Mediterranean, whence it spread into the remote corners of Ireland and Gothland, both then apparently homes of the ante-Celtic races.

From this point we obtain a clearer view, susceptible of a wide extension, of the mysterious civilisation that preceded the Greek and the Roman in Europe, whose vast extent has been strangely lost and overlooked beneath the grandeur and the ruins of its daughters. We begin to see that the fall of the great Semitic peoples was a catastrophe as full of meaning and as extensive as the similar fall of Rome; that the Greeks were, like the Goths of a later day, but a barbarous race of intruders into an area which had a history before their arrival. Formerly we were directed to the first Olympiad as the beginning of reasonable culture. We now

begin to see that it marked rather a parallel age to the seventh century after Christ, when the dark ages that succeeded on the destruction of a civilisation reaching from Scandinavia to the Persian Gulf, gave signs of revival. We are pushing aside the curtain drawn over the earlier time by the arrival of the Indo-Europeans; when the Semites were the world's leaders, with the great king, the King of Assyria, at their head; when Tyre and Sidon were the metropolis cities of culture and wealth, and Tarshish in the west a region of renown to the Jew and the Assyrian. Some of the questions raised by this earlier historic prospect, I hope to examine, with your permission, on another occasion.

Having discussed the sources of tin, and the questions arising out of the manufacture and dispersion of bronze, I proceed to the remaining question of its chronology.

Brass, which in the Bible means bronze and sometimes copper, is repeatedly mentioned in the Pentateuch. The institutes of Menu refer to vessels of copper, brass, pewter, tin, and lead. Egyptian bronzes are known of as early a date as the sixth dynasty, and Agatharcides mentions brass wedges as found in the old workings in the Egyptian gold mines. Bronzes were found in tolerable abundance among the excavations at Nimroud. Homer teems with references to the metal. Bronze articles have been found among the ruins of Mycenæ and in the tumuli of the Trojan plain. The earliest undoubted Roman relic we have is the bronze wolf of the Vatican. Chinese bronzes, of which some have been exhibited at the Archæological Institute, and a sword with an early inscription now placed in the British Museum, are found of high antiquity; and, lastly, a lump of bronze unshapen was discovered by Mr. Christie in one of the caverns at Perigord. These instances carry us back to the very threshold of the history of many ancient peoples, to a time when our knowledge of the origines of mankind becomes at all tangible, and we then find bronze known among them all. We have seen reason to suppose that it was discovered and introduced by the Phœnicians,—when is a question at present unanswerable, save, perhaps, to intuitive philosophers. It will suffice that its knowledge can be carried as far back as records of historical, as distinguished from geological, value take us. I now approach the question of a bronze age upon which so many great authorities are at issue.

The terms stone, bronze, and iron age have served a good turn in ethnology. They have served as useful points around which to group a confusion of facts. But their vagueness and indefiniteness has given cause to so much wild writing, that I think it is worth while considering whether their continued use is not a mistake.

In the first place they are confined to the periods supposed to be distinguished by the use of stone, bronze, and iron for cutting instruments; that is to say, the ages ought to be styled those of stone, bronze, and iron weapons, rather than of stone, bronze, and iron. Again, one school of archæologists separate the early history of every distinct race into periods of progress, which they aver are generally marked by the successive use of stone, bronze, and iron for weapons. Another school argue that this successive use rather marks eras in the world's history than periods in that of every distinct people. Beyond an inviting *à priori* assumption that the universal law of history is the progressive advancement of mankind, I can find little support for either of these positions. Such a law is, perhaps, true in the main, but is falsified in particular cases by every step we take in ethnology. It is but a poor reason in these days of positivism, when *à priori* reasoning and the searching for the beginnings of things in inner consciousness, rather than in the laboratory of nature or the ruins of its history, is held to be poor philosophy in every science pretending to a fixed and sound character.

The South Sea Islanders and the South American Indians, who still use stone weapons, the Indians of the Copper-mine river and certain Siberian tribes, who use, or till very lately did use, copper weapons, the Esquimaux, the Andaman Islanders, and the Negroes of Central Africa, who use iron implements, it would be difficult to class in order of culture according to such a rule. If we go to ancient authorities, and examine the armature of the levies in the army of Xerxes as given in *Herodotus*, we shall find an equally difficult task, every kind of offensive weapon from steel to burnt wood, with all the intermediate varieties of bone, horn, and stones, being used and described.

I object entirely to start with the assumption, for which I do not know of a tittle of real evidence, that the civilisation of the man who uses flint flakes is the *natural* ancestor of that of the man who uses a Sheffield razor. The abject humanity that crouches round the pyramids, that lives under the shadow of the Parthenon, that looks wonderingly at the huge monuments of Ceylon and Java, is a protest against such a generalisation. Altered conditions of livelihood have converted the Hottentot into the Bosjesman, and the Indian of the plains into the digger Indian, have converted the undoubted flesh and blood of the Anglo-Saxon into the very questionable compound who is the pioneer of civilisation in Texas, I mean the Indian trapper; and it only requires an aggravation of the circumstances to make the Sheffield whittle grandfather to the obsidian knife.

The possibility, I say, is unquestionable. I have tried to

shew that in the earliest ages to which we can carry any sound criticism, the manufacture and trade in bronze in the east were the monopoly of the Phœnicians, who had to carry it a long way; and, no doubt, to charge very dearly for it. The area of demand for dear luxuries was then probably confined to the valleys of the Nile and the Euphrates, and the countries bordering the Eastern Mediterranean. As we recede from this focus, barbarism would assuredly increase, deducing our conclusion from modern example. Forests then covered large areas which are now cleared, cultivation was apparently confined to the deep soils on the banks of a few rivers and lakes, and men were forced from the nature of things to be nomades and hunters rather than settled husbandmen. Whatever we find to be the condition of such a class now, when the whole course of human culture has increased, and, above all, intercourse between remote countries has become the rule instead of the very exceptional example, that, exaggerated a thousandfold, we may expect to find in old days. The Londoner and the Canadian voyageur of to-day, the courtier of Elizabeth and the Irishman without the pale, the knight of Edward I and the follower of some northern chieftain, are modern examples of the effects of retrogression from a centre of cultivation.

Bronze would be cheap comparatively at Babylon, Nineveh, Tyre, and Sidon (abounding in brass, as she is called), and might, and did, as we know, form the armour of the Canaanites and some of the Assyrians. But we can well believe that it must have been a very expensive luxury in the Getan waste and the German forest, and its use confined to a few rich individuals alone there; the common folk must have employed the boulders out of the river for their hammers, experts would imitate out of the harder stones, such as flint, etc., the occasional bronze models they saw, and the bones and horns of their game would be fashioned into ornaments and needles, and other articles. The further from good models they receded, the ruder would become the imitations and the workmen, until, when we arrive in the further limits, men would become such rude and clumsy artificers, that their tools would only bear comparison with those found among the diminutive Indians of the Rocky mountains and the inhabitants of Carpentaria. The question would be one of price to those within the limits of the then trade; and to those without it, it would be such a question as the introduction of a Schneider rifle to the inhabitants of the Victoria Nyanza; and, in fact, if we deduct our means and opportunities for intercourse, the introduction of bronze would not be unlike the distribution of the products of our civilisation in Africa and in Central Asia, and our evidence is abundant that such was the

case. At Nineveh, flint arrow-heads are found mixed with bronze weapons. The same in Egypt. The poorer Satrapies, as we have said, in the time of Xerxes, sent their levies armed with stone and flint. Throughout the wide archæological field of Scandinavia, Germany, Hungary, Gaul, and France, we find where there are bronze weapons there are generally stone ones too; and I have many examples, if it were worth while quoting them. The Huns, we are told, used bone arrow-heads. The Anglo-Saxons used stone hammers at Hastings. The same weapons are said to have been used in the thirty years' war; and are mentioned by Irish writers as in use there in the sixteenth century. Flints are still used by the remoter Laps, and by the Jews for circumcision. We are told that when bronze and stone are thus found together, it is a transition period; this may be answered by the fact that bronzes of the finest workmanship are found among the very earliest of such relics, and a transition period surely demands a transitional condition of rudeness.

As the forests were cleared, as roads were opened up, as trade increased, and the Carthaginians, and the Greeks, and the Etruscans began to colonise, the luxury of the few would become the necessity of the many, and bronze would gradually drive out stone. But this would be progressive, and to fix an absolute date would be impossible.

From the way in which the early poets dilate on the beauty of its polished surface, a glitter not so easily dimmed as that of iron, we may suppose that this was one reason for the preference given to bronze. Another is to be found in the fact that, although iron is incomparably superior to it for weapons intended to cut, for those meant to thrust with only, bronze, hard and easily pointed, is by no means an inferior material. As we know, in the earlier times, the body armour was thick and heavy, and covered nearly all the vital parts, cutting with swords was then impracticable, and we never see it represented in the older sculptures, the thrust between the joints of the armour was the deadly method of despatching an enemy. As this heavy body armour was dispensed with, cutting edges became useful, and were, doubtless, introduced. We know from the pictures and sculptures of the Assyrians, the Greeks, and the Etruscans, that the lance and the pilum, rather than the sword, were the weapons in general use, and probably for this reason alone. The introduction of bronze at Babylon would follow closely on the discovery of its metallurgy; into Greece, as soon as Cadmus and the heroes of an intangible tradition introduced culture there. Germany would probably have to wait till the Tuscan shore was colonised.

Britain may have remained without bronze till the black-cloaked Iberians had pushed ashore there. The dates of these events are beyond our ken, and in being unknown involve our ignorance of the earliest introduction of bronze. The use of iron, which is supposed to have displaced it, can be carried back to quite as early a date. It is mentioned with it in the Pentateuch, swords and axe-heads of it are found in Egypt and Assyria, and ancient mines of it are known in both countries. It is mentioned by Homer as occasionally used for weapons, and in the *Revue Archéologique* and the *Archæological Journal* may be found many instances of its discovery with stone, to the exclusion of bronze, especially in Russia, and the instances of stone, bronze, and iron occurring together are too numerous to detail. The reasons for its continued use when iron was known have exercised the ingenuity of many antiquaries.

Mr. Crawfurd, in a paper recently read before this Society, insists, with a clearness I cannot hope to rival, on the comparatively late discovery of the art of tempering as one reason for the late introduction of iron into general use, that it is highly improbable that bronze would have been used at all if a supply of steel had been available, and that the makeshift of a soft iron alone admitted of a profitable trade in bronze along the whole length of the Mediterranean. We find, however, that the method of tempering was almost as rude in the time of Pliny as in that of Job. We find, too, that Assyria, which was remotely situated in respect of a bronze supply, chiefly employed iron both for offensive and defensive weapons, and many such remains still exist; and we learn that in Xerxes' army their contingent was armed with clubs shod with iron, their other arms being like those of the Egyptians. Their bronzes are often alloyed with iron. Arrow-heads of the latter metal were found by Ouseley and Rich among the ruins of Persepolis. Iron was scarce in Egypt, and few weapons made of it are found in collections, yet in the paintings of the wars of Rameses II, we see arms figured as of two colours, blue and red, the former Sir G. Wilkinson considers to be iron, the latter copper or bronze.

Iron was well-known to the earlier writers of the Bible. The head of Goliah's spear was made of it; and in the Pentateuch it is spoken of as then used for chisels, axes, nails, and chariots. Homer tells us of arrows tipped with iron, of iron-shod clubs, and of iron axes and bills. In the *Odyssey* he tells us iron weapons were kept in a chest together with gold and brass ones. A lump of iron was one of the prizes at the funeral games of Patroclus. His epithet of "difficult to work" may add another reason for its somewhat limited use. The main reason,

however, I conceive to have been that bronze was, from its appearance and hardness, much more highly prized. In the neighbourhood of the sources of tin, it would be then cheap, and its remains are now abundant. When we recede from these centres, they become scarcer, as in ancient times *it* would become dearer. As the sources of tin were overrun by barbarians, or neglected from the decay of the Phœnicians, bronze would become very expensive, and iron would gradually supersede it; and when once superseded and the body armour discontinued, its reintroduction would be impracticable. It is interesting to trace the mention of its use among later authors. Pindar refers to brazen spears and axes; Sophocles describes Medea as cutting poisonous plants with brass razors; Xenophon speaks of brass scimiters; and Aristotle says that the wounds inflicted by iron are not so deadly as those caused by brazen weapons. Pausanias refers to brass weapons as archæological curiosities, and mentions several as preserved in the older temples. In Japan we are told that primitive stone hatchets are now reverenced in a similar manner.

The Etruscans, in early times, although working the mines of Etna, used iron but sparingly, and their arms are chiefly brazen. Pliny tells us that the armour of the Samnites was made of the same metal, and that the Campanians used shields and swords of brass. These were the Italians from whom the Romans, according to a scholiast on Sallust, derived their weapons. In the times of the kings they were thus armed. Pliny, on the other hand, quotes a treaty by which the Romans, at the instance of Porsena, agreed to discontinue the use of *iron* except for agricultural purposes. Niebuhr, on what authority I do not know, says that the Gallic war made the impoverished Romans replace their ancient weapons by new ones made of iron. On other grounds I have come to the conclusion that it was about this date that bronze was practically discontinued in Italy.

The Gauls, before attacking the Romans, had annihilated the Etruscan settlements in the Alps and Lombardy, they had overrun Southern Germany, and in doing so had undoubtedly cut off the Etruscans from the mines north of the Alps. They had also shattered to pieces their ancient power in Tuscany. This invasion would disturb the supply of tin and paralyse the local Italian trade in bronze, and necessity would compel the introduction of a substitute for it except for ornaments. If, as is probable at this early date, Greece was partially dependent on the same supply the same catastrophe would have the effect of introducing iron into more general use there also. The invasion of the Celts must have made itself felt in the remotest corners

of the Peninsula; we know, at all events, that Spain soon became celebrated for its iron, and the Spanish sword was introduced into Rome, as is well-known, by Scipio. Bilbilis in Spain, and Noricum in Gaul, became celebrated workshops for this weapon. Polybius describes the Roman pilum and helmet as made of iron, and Pliny says that all the implements of war were then made of that metal. An iron crowbar was found in the hand of one of the skeletons at Pompeii, and the head of the pilum of the celebrated Roman sentinel found there was also made of iron. The equally celebrated sword of Tiberius found at Mayence, and now in the British Museum, is made of the same metal. An iron hatchet with a Roman inscription is figured in the *Revue Archéologique* for 1865, and three hundred and ninety-three iron heads of javelins were dug up in 1824 in the centre of a Roman intrenchment at Meon-hill in Gloucestershire. These instances might be accumulated *ad libitum* to prove the constant use of iron among the Romans. Not one well attested instance exists, that I am aware of, of the discovery of a bronze weapon of undoubted Roman origin; indeed, I consider the argument of Sir John Lubbock on this question unanswerable. The only mention of the use of bronze in Roman times that I have been able to discover is an obscure statement of Strabo's, that the Lusitanian used bronze tipped javelins, and this statement is hardly corroborated by Diodorus. Quotations from the poets, who speak of brazen armour as ours do of the wooden walls of old England with a conventional taste and patriotism, are hardly of much value against such an array of evidence. Beyond the Roman world, the same change had taken place. The Gallic swords mentioned by Polybius as bending like strigils, were hardly made of bronze. Diodorus expressly states that the Gallic lankia, with blades a cubit long, were made of iron, as were also their swords. The Ædui under Tiberius are also described as using iron armour. These quotations will suffice. Our conclusion from them, and from other cumulative evidence, is that we may look upon the destruction of the Etruscan power in Italy and the advent of the Celtic tribes into the west as the era when the use of bronze was generally discontinued. In out of the way districts it may have survived somewhat longer, but I cannot bring myself to extend the period to a time when Roman influences were introduced there. To sum up in some measure the conclusions I have come to, I may say that I look upon the earlier culture of Europe as Phœnician and Semitic, and that it was *introduced* and not evolved out of the innate capacities and powers of its rude inhabitants. That the bright spots on the Mediterranean, whence that culture was dispersed, were so many colonies of

Phœnicia, *qua* that culture. That the manufacture of bronze and its dispersion formed one incident in the leavening of the primitive Europe with its advanced influence. And that the presence of a piece of bronze in an out of the way area is a mark of the extent to which the enterprise and commerce of Tyre had reached rather than any absolute test of the relative progress or the ethnologic affinities of such area. Lastly, that the use of bronze for cutting implements was practically discontinued in Europe somewhere about 350 B.C., while its introduction was dependent on the spread of geographical adventure by the Semitic race, whose earliest records mention it as known to them. In the great sources of tin, such as Spain, it must have been nearly coeval with its actual discovery.

In bringing this tedious paper to a close, I cannot help regretting the tentative nature of its conclusions, a quality which seems inseparable from archæological inquiries, which depend more upon a balance of evidence than upon experiment. I do not claim for it anything more than as containing the crude conclusions of inexperience, many of them, perhaps all of them, already forestalled, for I am but a gleaner on a well-harvested field. If I have added a small truth to the accumulated bundle of the world's knowledge, I shall be content, and shall feel that I have in some measure excused the presumption of addressing you.

VI.—*A Contribution to the Ethnology of the Chinese.* By J. Lamprey, M.B., Surgeon, 67th Regiment.

[*Read March 12th*, 1867.]

The Chinese are generally supposed to be a homogeneous race of men, of a marked Mongolian type. So far, this is to some extent perhaps correct, though the characters of the type are not so uniform in any one locality, no more than throughout the whole area of China, as is generally supposed.

It does not take long, on visiting any part of China, to convince ourselves that all our preconceived notions of the Chinese type of countenance are very erroneous. It is only occasionally, and that after a stretch of our imaginations, that we do perhaps detect a face having some resemblance to the ideal form we are familiar with in the paintings on old china, and but rarely recognise an individual we can pronounce to be really like a Chinaman according to our preconceptions. In short, the variety of countenances is as puzzling in a crowd of Chinamen, as in a crowd of people in any other country.

Foreign residents in China soon learn to recognise modifications in the peculiarities of form of individual countenances; that in some the prominence of the malar bones is very exaggerated, in others it is hardly to be noticed; that some Chinamen have more prominent noses than others; that in some the interval between the eyes is very remarkable, while in others it has no such abnormal appearance; that while some may have considerable obliquity of the eyes, the eyes of others are not at all oblique. In the course of time, we are also able to recognise the distinctive characters of the inhabitants of the different provinces; and, though in some instances it may be a difficult matter to designate in what the distinctions consist, there are cases where the differences are very marked, for instance, the inhabitants of Quangtung (Canton) are at once recognised by their squareness of face, massive jaws, and prominent malar bones; they are generally short set, and stoutly built. On the other hand, the inhabitants at Kiangsu (Shanghai) are taller, lighter in build, have less prominence of the malar bones, smaller jaw, a more tapering face, at times passing into the oval form.

Of all the characteristics of the face of a Chinaman, the most commonly noticed is the flatness of the inter-orbital space, and the consequent small size and little prominence of the nose, but

even this peculiarity varies considerably, not so much in prominence of the surface as in width of the space. In some instances this width is most remarkable; I have measured one individual, and found the distance from the inner angle of one eye to that of the other to be one inch and three-eighths in length. The nose of the Chinese is sometimes found almost as narrow inter-orbitally as the noses of Europeans, and, like theirs, it is aquiline or oblique, or even *retroussé*; in no instances are the nostrils extended, and no matter what may be its form, it is small in size. A foreigner, unless his nose be very small indeed, no matter how well disguised, is at once recognised by the size of his nose; it is the first feature remarked upon by the Chinese when he appears among them, "what a big nose he has got!" being a common observation.

With regard to the difference in the relative size of the noses of the two people, it is certain that the Chinese are capable of withstanding the abominable smells in their streets and in their fields under cultivation, which to the European are utterly intolerable—I allude to their system of conservancy in their towns and their agriculture. The question whether the smells reduced the size of their noses or not, remains an open subject for speculation.

In some instances of broad inter-orbital spaces I have observed a fold of skin overlap the inner angle of the eye, and only disappear half-way between the angle of the eye and the alæ of the nose. Rarely a very marked obliquity of the eye is met with, just as it is equally rare among the Japanese. I mean an obliquity amounting to an angle of about one hundred and twenty degrees; yet we find this form of eye in sculpture and in drawing, not only over the area of China, but also of Japan, Thibet, and over Asia generally, and also in Egypt. It would appear that obliquity of the eyes is less a characteristic of the Chinese than of surrounding nations; for instance, the Gylyaks, inhabiting the shores of the straits of Sagalien, have it as a constant peculiarity; the Thibetans are delineated by travellers with very oblique eyes; and the most exaggerated instance of it I have ever seen was in a Malay soldier in the Ceylon Rifles.

Eyes of Chinese, especially in the more northern parts, are generally very small compared with those of Europeans; the diameter is much less and the aperture much narrower, so that I found great difficulty in performing operations on them. It was very seldom that a large full eye was met with, yet I have seen such. In considering this subject, it struck me that very possibly the size of the eye had become so modified by the effect of the climate; the exposure to the dust storms, which occur at certain periods of the year, give rise to a great amount

of diseases of the eyes, especially entropium, which Dr. Lockhart and others, who, like myself, have had experience in hospital practice among the northern Chinese, can testify to. May not the continued habit of closing the eye, and the irritation set up by the particles of dust have produced this result, which has become hereditary and fixed?

In a recent work on ethnology it has been stated that every possible variety of shade of skin is to be met with in China, —permanency being understood. There could be no greater mistake than this; which arises from the fact that the skin of the Chinese, more especially in those of the north of China, undergoes a great change of colour during the different seasons of the year. I have noticed, in the fields about Tien Tsin, the labourers who were at work during the excessive heat of the summer, with merely a common band round their loins; or who were employed as coolies carrying burdens through the town on the wheel-barrows of the country, the upper portion of their bodies being without covering; to be as dark-skinned as any Kaffre in South Africa. So much did this strike me, that, at the time, I thought they must have had some mixture of Negro blood, till I subsequently noticed that these coolies and labourers lost the dark tint of their skin, and became like the ordinary complexion of Chinamen in the cooler seasons.

I had also observed that when the Cantonese coolies, who were employed with the expedition in North China, stripped for bathing, one part of their body which had been exposed to the sun (they generally stripped themselves to the waist while carrying their loads on very hot days) was of a very dark tint compared with the parts which were not exposed. In some this was more marked than in others; but the appearance the majority presented was very remarkable.

I have not observed this darkening of the skin to be so well developed in the Chinese labourer in the south of China as it is in the north, where also the skin is sometimes seen to be almost as white as in Europeans. The dryer and (in the summer) hotter climate of the more northern provinces may cause this difference; the climate of the south is more humid, and the temperature does not reach the same height in summer.

The Chinese do not appear to be in the least contaminated by Negro blood, and thus we find the population of the eastern division of Asia presents a different aspect from that of the western. Is this because China was too far away from the coast of Africa? or is it because the lazy unindustrious Negro could not be tolerated, and was worthless to the energetic laborious Chinese?

I can hardly suppose that the Hottentot race of South Africa,

whose skull bears some resemblance to the typical Chinese, could be the remains of a Chinese colony established there in remote ages like those of the Arabs and natives of India at present on the east coast, as described to us by Burton, and other travellers, to carry on the slave trade. If such were the case, and that Negro slaves were ever imported into China, the traces of the Negro have become completely obliterated in the race.

Throughout China there are several isolated groups of the inhabitants, more or less independent, and having specialities in their language and customs peculiarly their own. They are called generally the Meaon tse by Chinese writers, who have enumerated them for us, and described their appearance and customs, and the locality where they are to be found. There are eighty-two groups tabulated in the work of a Chinese author, the translation of which is published in the North China Branch of the Royal Asiatic Society's Journal for 1859. It is very probable there are many others not yet described. Some of these Meaon tse are described as being black, others as white skinned; but till we know the peculiarities of climate and the circumstance of exposure, we cannot form an estimate of the permanency or otherwise of the blackness of the skin. They are described as being more or less rude; some are wild savages. Blackiston describes some of these people met with at the farthest limits of his travels up the Yang tse.

I have myself noticed a few women belonging to one of their tribes in the streets of Tien Tsin. They came from Shantung. They were recognised by the peculiarities of their dress, but in other respects their appearance did not show any difference from the ordinary Chinese. They were strolling musicians, sung songs, and accompanied the air by striking flat pieces of wood in the hand, resembling *bones*, with which they kept a monotonous time. They had a patois only intelligible to themselves, but could speak Chinese.

Although using the same written character, the dialects of the Chinese are very various. The dialect of Pekin differs from that of Nankin, and both differ from those spoken at Canton and Fokien, which also differ from each other, so much so as to present the appearance of being separate and mutually unintelligible languages. So much is this the case that it is not uncommon for those who bring Chinese servants from the south of China to find that they do not understand the language spoken in the northern parts of the country, and that they are obliged to resort to English to make themselves understood by their own countrymen. It is frequently found that it is a matter of some difficulty to understand the dialect spoken in a

village; while in another a few miles apart the dialect may be quite intelligible. These different dialects show that the Chinese language, if ever it had an unity, is capable of great and, perhaps, as we shall presently see, rapid modification.

The children of a village always associating together for play, in China, perhaps, more than in any other country, acquire modes of expression of thought and of pronunciation of words, so easily altered by change of accent or emphasis in Chinese, which are used in after life; and not being given to much locomotion or mixing with strangers, these new words and mode of accent become fixed. Schools and the study of the classics may prevent this to some extent; but yet they are not sufficient to prevent change; we find a great modification of the word sounds of the classics has taken place. The Japanese have studied this subject, and published the result in the form of a dictionary of the ancient and modern sounds of the characters used in the four books *(Chinese Classics)*.

As a further illustration of change in the pronunciation of Chinese from lapse of time and of difference of dialects, it may be stated that the word Japan, which is written by two Chinese characters meaning the *sun* and *source*, was pronounced in the north of China, in Marco Polo's time, as if spelled Zi pan. The modern sounds would be Jeh pōn, meaning the same as Ni pon, the southern or Nankin mode of pronouncing the same characters, and now adopted by the Japanese themselves to designate their country.

The nations who have had an ethnological influence on the Chinese are few. It might be supposed that the Mongolians have stamped them with their features, and have repeatedly renewed their mark by overrunning their country at different periods; but, independent of this, when we come to analyse their language, we find that Mongolian, Manchu, Turkish, and Chinese have evidenced in their radices of words so great a similarity, that we may infer a common origin to them all. The remarks of Mr. Edkins, the well-known Chinese scholar, who is now engaged in these investigations, bear so much on this point that I may quote those he kindly sent to me in reply to inquiries I had been making on this subject. He says:—

"I have lately been examining the connection of the Chinese and Mongolian languages, and find great reason to believe that the physical resemblance of the races mentioned by travellers is borne out by connection of language. The connection from this point of view must be sufficiently ancient to allow of the growth of the existing differences in the languages, which are great. My result is that the Sinensian and Turanian families were connected anterior to the growing up of tones in Chinese.

Chinese *tien*, old Chinese *tĕn*, Mongol *tengri*, *heaven*. Chinese *ti*, old Chinese *de*, Mongol *du*, old Mongol *degu*, *a lad*. In the word tĕngri the suffix is gri, the root is tĕn. In degu the suffix is gu, the root de. Tones have developed themselves in Chinese, and also compound forms, as hiung ti and siau ti for *brother*. In Mongol the suffixes have been appended without tones. The roots of a vast number of Mongol words are the same as in Chinese. The same is true, but in a less degree of Manchu and Turkish, which also bear a resemblance in root words to the Chinese, but are of less extent; according to this theory, therefore, these three branches of the Turanian family should be related in origin to the Chinese."

Persia has helped to modify the Mongolian type to a considerable extent. It is to this source I am inclined to consider the oval form of face, and the more prominent nose, and those long-bearded venerable looking heads we now and again meet with among the Chinese, are due.

In reply to my inquiries relative to this subject, Mr. Edkins informs me that "the Turkish Mahomedans I have met with in Pekin wear red caps. The ordinary Chinese Mahometans here are probably of Persian origin; they wear both blue and white caps. We cannot find any traces of Jews or Hebrew in Pekin. The Mahometans use Persian and Arabic books."

"The Mahometans of Canton are probably of Arabic descent, coming in the time of the Arabian trade with China. Mahomet's uncle died at Canton."

"The Persian Mahometans seem to have come into northern and western China in great numbers for purposes of trade. The same impulse which brought the Arabs to the sea coast brought the Persians from Bokhara, etc., and both originated in the national impulse communicated to the Arabians and Persians by the Mahometan religion and the effect of the conquest."

Mr. Wylie, quoting from the narrative of Abou Zeyd Al Hassan, tells us that in 878 a general massacre took place at Kan Fu:—"People who are well informed regarding the affairs of China relate that there perished on this occasion a hundred and twenty thousand Mahometans, Jews, Christians, and Parsees, who were established in the city, and carried on trade there, besides the number of the natives who were put to death. The number of persons of these four religions is known because the Chinese government levied an impost upon them according to their numbers." (*Chinese and Japanese Repository*, August, 1863, page 44.)

It is to this source, perhaps, we may attribute those Chinese noticed in the north of China, who, if they would allow their

whiskers to grow, would show at once their Jewish or Persian origin; one of these individuals was well known as a fur dealer in Fur-street at Tien Tsin.

The nations to the south may have had some influence, while they were strong, vigorous, and civilised, such as the ancient Laos; but latterly the Chinese appear to have had an influence on them, and hence an Indo-Chinese group has been formed. We have as yet had little or no intercourse with the more southern provinces of China, viz., Yunan; but the Chinese appearance of the Burmese is unquestionable.

On the sea-coast, the Arabs have had intercourse at an early date, but their communities as colonists at the trading towns were, perhaps, not greater, if so great, as the foreign communities now established at Fuchow, Ningpo, Shanghai, etc. And the Japanese, though at one time in possession of the district city of Suchow, exerted little influence in an ethnological point of view.

After the Arabs, the Portuguese, Dutch, English, Americans, and French have had intercourse with China; but, whatever may be the extent of their religious, social, and political influences in the course of time, their ethnological influence can be but small.

The hair of the head of Chinamen in general is black in colour, coarse, and free from curl; however, when grown to its full length, it appears slightly wavy, as for example in the Chang Maou boys. I have once seen a Chinese lad of sixteen years of age with decidedly red hair, and, as usual in such cases among Europeans, he had a remarkably clear fair skin. I was under the impression that probably he derived the tint from foreign parentage; but on inquiry, such was denied, though his family resided in the neighbourhood of the foreign settlement of Shanghai. Another instance of red hair in a Chinaman was mentioned to me as occurring in a full-grown man, who was taken among some rebel captives, and who belonged to a district remote from foreign settlements. In Chinese paintings representing some of their celebrated warriors, the hair of their heads is frequently coloured bright red; but the colour is so rare among the Chinese that foreigners having this peculiar tint cause much wonder and astonishment. Occasionally Chinese children in the vicinity of the foreign settlement may be seen having a light shade of colour in their hair; in such instances the foreign element is quite unmistakable.

In the north of China a brownish tint appears to prevail to some extent, at least more especially in young persons, whose hair is not of the black tint noticed so generally in the south of China. I have remarked that even grown-up people from the

province of Shantung show a brownish tint or shade in their hair, especially in that of the moustache, I have seen some decidedly foxey; and in the Shu Kings we find the Chinese mentioned as "the black haired people," which evidently means that their black hair distinguished them from people whose hair was not black; so that it is possible in isolated districts, such as Shantung, must have been, at the earliest period of Chinese history, when it was separated from the remainder of the country by a wide marshy uninhabited waste, there were tribes of aborigines whose hair was probably of a brown colour. In the history of the early progress of the Chinese, allusion is made to contact with local tribes.

In the Ming and preceding dynasties, it was customary for the Chinese to wear their hair long, and to tie it up on the top of the head, much as the Coreans do now; but, on being conquered by the Tartars or Tsings, they were compelled to shave all the head except a small portion on the top and back of it. This hair was plaited into a queue or tail as it is generally called. This was enforced as a mark of submission. The Taepings showed their hostility to the Tsings by allowing their hair to grow, and were in consequence called Chang Maons or long haired ones. The Maou Tsze, or independent tribes, continue to wear their hair long; and the people of Fokien, who long resisted the Tsings, wear turbans to conceal their mark of submission. Turbans are worn by the soldiers in the Chinese Imperial Military Service.

The Mongol characteristic is more particularly exhibited in Chinese physiognomy by the absence or partial development of moustache, beard, and whiskers. It is not uncommon to see an old Chinaman with two or three short straight hairs in his chin as the only indications of a beard, and in such cases hair forming moustache or whiskers is often entirely deficient. The hair in both sexes is little developed, and when present is of the same straight, short, wiry character as that of the face. Wherever exceptions occur, they are, no doubt, attributable to mixture of foreign races, and hence the instances of long-bearded, or, if they did not shave, of large whiskered men seen among them.

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VII.—*Description of an Aino Skull.* By George Busk, Esq., F.R.S.

[*Read March 26th*, 1867.]

The cranium here described, and of which figures are given in the accompanying plate, is the only one of the kind that has come under my observation, but from what I have learnt from one who has had an opportunity of seeing others, it would seem to represent very fairly the usual cranial conformation of the curious and little known people from which it is derived. The cranium is not in my possession, and for the opportunity of examining it I was indebted some time ago to Professor Huxley.

1. The dimensions of the cranium contrasted with those of an ordinary European cranium (English) of the same rather unusual length, are as under :—

	Dimensions in Inches.	
	Aino.	European.
Length	7·8	7·8
Breadth	5·5	5·8
Height	5·7	5·8
Least frontal width	3·9	4·1
Greatest "	4·4	4·7
Parietal "	5·5	5·3
Occipital "	4·6	5·
Zygomatic "	5·6	5·4
Frontal radius	5·	4·6
Vertical "	5·	4·9
Parietal "	5·2	5·0
Occipital "	4·5	4·65
Maxillary "	4·2	4·15
Fronto-nasal radius	4·1	4·
Circumference	21·6	21·6
Longitudinal arc	15·8	15·4
a " frontal arc	5·3	5·
b " parietal "	4·7	5·4
c " occipital "	4·8	5·0
Frontal transverse arc	12·8	12·2
Vertical " "	13·5	13·
Parietal " "	14·2	13·7
Occipital " "	12·2	12·4
Latitudinal (cephalic) index	·705	·745
Altitudinal "	·730	·745
Gnathic* "	·1	·15

* By this term I propose to express the difference between the maxillary and fronto-nasal radii, the greater or less degree of which may in a mea-

II. *Norma lateralis.*—Face nearly orthognathic, teeth vertical, chin prominent and well-shaped, nasal spine well developed, brow overhanging the root of the nasals; nasals short, much hollowed, acquiline in outline; forehead rather reclined; longitudinal outline of cranium regularly semicircular in the vertical, and full in the occipital region; lateral sutures all open; the parietals join the alisphenoids for the extent of about half an inch; temporal line strongly developed, especially in front.

III. *Norma occipitalis.*—Vertex somewhat pyramidal, sides vertical, slightly hollowed below; superior occipital ridge and spine enormously developed; a small *os triquetrum* on either side; the posterior third of the sagittal suture completely ossified, but not obliterated; a single large *foramen parietale* on the right side.

IV. *Norma frontalis.*—Orbits wide transversely, oblong, angular; nasal opening oval or sub-pyriform; forehead contracted; frontal sinuses large, prominent; supraorbital border thickened towards the outer angle; malars large and prominent.

V. *Norma verticalis.*—Frontal region contracted; zygomata widely open; alveolar border just visible; nasals invisible; coronal suture simple and wavy in the middle part, afterwards more serrated; first inch of the sagittal simple and nearly straight, afterwards complex.

VI. *Norma basalis.*—Alveolar border rounded; zygomata wide; mastoid processes enormous, with remarkably wide and deep digastric fossæ; spine of sphenoid very large and prominent; hinder margin of *foramen magnum* broken off; condyles large; jugular process of occipital (paroccipital) very large, and advancing in front to a level with the anterior border of the condyles.

From the above description and measurements the Aino cranium would seem to present no very marked distinctive characters from those of the European with which it was compared. Both in general volume and in that of the three regions scarcely any differences are observable, as is shown in the following figures:—

	Aino.	European.
General volume - - -	406 ...	410
Frontal region - - -	364 ...	355
Parietal „ - - -	294 ...	294
Occipital „ - - -	261 ...	270

Nor with respect to the individual measurements as given in the table, is there much to call for remark. The forehead,

sure be taken to represent the amount of prognathism, and thus to supply the place of Camper's facial angle, as I have before had an opportunity of remarking.

though narrower in the Aino, is somewhat higher than in the European; and another difference is shown in the greater transverse parietal arc in the Aino, indicating a greater roundness or fulness in that region. In general character the cranium may be described as dolichocephalic, nearly orthognathous, and phenozygous; well-formed and symmetrical, and equal to, if not exceeding, the full average dimension of European skulls, from which it would seem to differ chiefly in its being very distinctly phenozygous; and it also differs not only from the European, but from all other types of skull with which I am acquainted in the greatly advanced position of the jugular process of the occipital bone. But as this may be merely an individual peculiarity, no particular stress can be laid upon it. The individual to which it belonged must have been a man of probably large stature, and extremely muscular, with an acquiline nose, overhanging brows, slightly prominent jaws, high cheekbones, and, not improbably, elongated eyes.

DESCRIPTION OF PLATE OF THE AINO SKULL.

Fig. 1.	Lateral view	...	(*Norma lateralis*)
2.	Occipital „	...	(„ *occipitalis*)
3.	Frontal „	...	(„ *frontalis*)
4.	Vertical „	...	(„ *verticalis*)
5.	Basal „	...	(„ *basalis*)

VIII.—*On the Vegetable and Animal Food of the Natives of Australia in reference to social position, with a comparison between the Australians and some other Races of Man.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read March 26th*, 1867.]

I LATELY received, through the kindness of Sir Charles Nicholson, a scientific statement of all the esculent native plants of the colony of Queensland, a territory the extensive bounds of which, embracing tropical, subtropical, and temperate climates of Australia, may be considered a fair average for the whole continent.

The list is drawn up by Mr. A. Thozet, a skilful and experienced botanist, now a permanent settler in Australia. Its possession suggested the idea of drawing up an account of the vegetable and animal food of the aborigines of Australia, and such is the purpose of this paper. Before doing so, however, I shall attempt to give a rapid outline of the great and eccentric region concerned.

The continent of Australia is, then, about twice the extent of China, and three times the extent of Hindustan. It is, however, by no means valuable to man in proportion to its extent, for the continent of Africa excepted, there is no great portion of the earth's surface which compared to extent contains so large an amount of worthless desert. About one-third part of Australia is strictly tropical, a third subtropical, and a third temperate. Unlike Europe, Asia, and America, it is destitute of great mountain chains. It has but *one* range, called or miscalled the Australian Alps. This runs at no remote distance from the eastern coast, and therefore influences but a small portion of the continent. Its height does not exceed one-half that of the Alps of Europe, and is not equal to one-third of that of the Alps of America, or one-fourth of the Alps of Asia. Australia, then, has no great chain of mountains of elevation sufficient to generate a cold adequate to the precipitation of the rain of passing clouds, and therefore it is eminently hot and dry, with fitful visitations of torrents of rain which inundate the low lands. The tropical part of Australia is subject to the influence of the south-east and north-west monsoons, but with less regularity than in lands lying north of it and still south of the equator, and with a great deal less than under the monsoons which prevail to the north of the equator. The absence

of any great chain of mountains precludes the existence of great navigable rivers similar to those of the other great quarters of the globe. It has no Mississippi or Hudson, no Yantse, Ganges, or Euphrates, no Nile or Niger, no Danube or Rhine, —not even a Seine or a Thames.

Australia, in every sense more new to us than what is called "the New World," was not known to Europeans until the first years of the seventeenth century, and even then rather seen than discovered; and this was above a century after America had been discovered,—even partially colonised, and its products had become familiar to Europeans.

Australia is singular in its physical geography, in its climates, in its vegetable and in its animal productions, man included, for here he is of the same uniform black over 30° of latitude, while in corresponding climates of the earth's surface—America excepted, where he is red—he is fair, black, brown, red, and yellow.

The total number of the esculent plants of Queensland, which extends over 20° of latitude, is forty-seven, which Mr. Thozet divides into three classes. The first of these includes such as are eaten raw, or without preparation, and they amount to thirty-six, being, therefore, the bulk of the whole. The second class, which includes also a few of the first, amounts to nine, and they embrace plants, or parts of plants, which require baking only to render them edible. The third class includes plants which are poisonous without pounding, edulcoration, and exsiccation, and they amount to six. The first category includes fruits, but as none of the native fruits of Australia are comparable in flavour to a crab-apple, and the rest are but very poor food, this class requires no further notice. The two last are the only ones of any importance, and as they must have furnished the main vegetable diet of the native Australians, I transcribe this part of Mr. Thozet's list as a curious record of the vegetable poverty of Australia, in so far as human food is concerned.

WITH PREPARATION.

BAKED ONLY.

ROOTS.

PHASEOLUS Mungo, Linn. *Komin,* Rockh. tribe. *Kadolo,* Cleveland Bay tribe.

Found slightly twining among grass. Stems and branches, hairy. Leaflets three, narrow, 3 to 4 inches long, acute. Flowers, pale yellow. Pod cylindrical, 2 to 4 inches long. Roots the shape of small long carrots.

ACACIA Bidwilli, Benth. Bidwill's Acacia. *Waneu.*

Found usually in stony ridges. A small tree, prickly when young. Small

leaflet fifteen to twenty-five pairs, one-eighth of an inch long. Roots of the young plants eatable.

DIOSCOREA punctata.

Large old roots.

BULBS, TUBERS, OR STEMS.

NYMPHÆA gigantea. The tubers.

APONOGETON sp. *Warrumbel,* Rockh. tribe. *Koornabaie,* Cleveland Bay tribe.

Found in shallow water in lagoons or ponds. A small aquatic plant. Leaves oblong, lying on the surface of the water. Rachis erect. Flowers numerous, small, and yellow. Bulbs spherical, ½ inch to 1 inch diameter.

DENDROBIUM canaliculatum, R. Br. *Yamberin.*

Very abundant on the decayed trunks and branches, principally of gum tree. (The bulbous stems, after being deprived of the old leaves, are eatable.)

HELOCHARIS sphacelata.

The small tubers, baked, are roughly pounded between two stones, and made in the same shape as almond cake.

STERCULIA quadrifida.

The mucilaginous substance of the unripe pod eatable.

AVICENNIA tomentosa, R. Br., Mangrove; *Egaie* (Clev. B. tribe); *Tagon Tagon* (Rockh. tribe).

A small tree, but sometimes attaining 18 inches in diameter; generally found on the estuaries of rivers and creeks. Small numerous roots protrude at the base of the crooked trunks. Leaves pale, green above, and white tomentose underneath. Fruit heart-shaped with two thick cotiledons. The aborigines of Cleveland Bay dig a hole in the ground, where they light a good fire; when well ignited they throw stones over it, which, when sufficiently heated, they arrange horizontally at the bottom, and lay on the top the *Egaie* fruit, sprinkling a little water over it; they cover it with bark, and over the whole earth is placed, to prevent the steam from evaporating too freely. During the time required for baking (about two hours), they dig another hole in the sand; the softened *Egaie* is put into it; they pour water twice over it, and the *Midamo* is now fit for eating. They resort to that sort of food during the wet season, when precluded from searching for any other. (Murrells' testimony.*)

Near Mount Elliot and Cleveland Bay, there is also an eatable root, *Wangoora*, probably a species of Ipomœa. The roots, very bitter, are cut in two, put into water for one hour or one hour and a half, and are afterwards baked for three or four hours, in the same way as the *Egaie;* they then carry it in a dilly bag (*Yella barba*) to the water's edge, where, by pouring water over and pressing it, they make the starch fall upon the bark in the same way as arrowroot falls from the cylinder into the trough; they wash it three or four times until the water is very clear, and the yellow fecula is then fit for use. (Murrells' testimony.)

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* The late James Murrells was a wrecked sailor, who lived seventeen years amongst one of the Cleveland Bay tribes, in Northern Queensland, Australia.

This plant may be the same as the one alluded to by Leichhardt, p. 284. "I tried several methods to render the potatoes which we had found in the camps of the natives eatable, but neither roasting nor boiling destroyed their sickening bitterness; at last I pounded and washed them, and procured the starch, which was entirely tasteless, but thickened rapidly in hot water like arrowroot, and was very agreeable to eat, wanting only the addition of sugar to make it delicious—at least, so we fancied."

(POISONOUS IN A RAW STATE.)

POUNDING, MACERATION, DESICCATION.

CALADIUM machrorhizon, Vent. *Hakkin*, Rockh. tribe. *Banganga* or *Nargan*, Clev. B. tribe.

Found in moist shady places. A strong herbaceous plant, with very large sagittate leaves. The young bulbs, of a light rose colour inside, found growing on large old rhizomes, are scraped, and divided in two parts, and put under the ashes for about half an hour. When sufficiently baked, they are then pounded by hard strokes between two stones—a large one, *Wallarie*, and a small one, *Kondola*. All the pieces which do not look farinaceous, but watery when broken, are thrown away; the others, by strokes of the *Kondola*, are united by two and threes, and put into the fire again; they are then taken out and pounded together in the form of a cake, which is again returned to the fire and carefully turned occasionally; this operation is repeated eight or ten times; and when the *Hakkin*, which is now of a green greyish colour, begins to harden, it is fit for use.

TYPHONIUM Brownii, Scott. *Merrin.*

A small herbaceous plant; found in sandy, shady places. Leaves sagittate entire or three lobate. Flowers purple, dark, of a disagreeable odour. The tubers, which are yellow inside, are manipulated in the same way as the *Hakkin*, but none are watery, and they are made to adhere together after the first roasting.

ENTADA scandens, Benth. *Barbaddah* (Cleveland Bay tribe).

A strong climber. Pod 2 to 4 feet in length, and 3 to 4 inches in breadth. The seeds 1½ to 2 inches diameter, are put into the stove oven and heated in the same way and for the same time as the *Egaie;* they are then pounded fine and put into a dilly bag, and left for ten or twelve hours in water, when they are fit for use. (Murrells' testimony.)

CYCAS media, R. Br. Nut palm; *Baveu.*

A graceful tree, with a crown of fruit the size of a walnut, yellow when ripe; very common on the mountain sides and in valleys. The nuts are deprived of their outer succulent cover (*sarcocarp*), and are then broken; and the kernels having been roughly pounded, are dried three or four hours by the sun, then brought in a dilly bag to the water stream or pond, where they remain in running water four or five days, and in stagnant water three or four days. By a touch of the fingers the proper degree of softness produced by maceration is ascertained. They are afterwards placed between the two stones mentioned, reduced to a fine paste, and then baked under the ashes in the same way that our bush people bake their damper.

POUNDING, MACERATION.

ENCEPHALARTOS Miquelii, F. Muell. Dwarf Zamia; *Banga.*

Found generally in the same locality as the palm nut, with a large cone

fruit not unlike a pine-apple. The seeds, orange-red when ripe, and separating freely, are baked for about half an hour under ashes; the outside covers and the stones are then broken, and the kernels divided by a stroke of the *Kondola*, are put into a dilly bag and carried to a stream or pond, where they remain six or eight days before they are fit for eating.

ENCEPHALARTOS sp. Leichardt's arborescent Zamia.

Prepared in the same way as E. Miquilii.

I submitted the entire list of Mr. Thozet's esculent plants to the President of the Linnæan Society, my friend George Bentham, and the following are his judicious observations on it:—"I return Mr. Thozet's pamphlet, which is interesting as showing what kind of food uncivilised races, who do not cultivate vegetables or animals, are obliged to put up with. There is probably not one of the 'roots, tubers, bulbs, and fruits' that would ever be touched by those who could get a supply of wholesome grain or cultivated food-roots, and perhaps none either that could by any process of cultivation be brought up to the standard of those which have already been modified for human use; whilst several may probably not unfrequently poison the hungry savage who resorts to them, as Hooker tells me is frequently the case with starving races he has come across, who are obliged to have recourse to indigenous roots. Mr. Thozet tells us that the only ones to be had in great abundance are those of his third category, which are poisonous in a raw state. Mr. Thozet, I learn, is a very zealous, active, intelligent, and persevering naturalist, settled at Rockhampton, and devoting himself to his adopted country and property; and his 'Notes' may prove useful to those who may be lost in the trackless wilds of the interior without any food but what they can pick up in the raw wild state."

The natives of Australia were far better provided with animal than with vegetable food. I can speak with the more confidence on this subject since I have taken care to consult the highest living authority on the subject, that of the distinguished naturalist Mr. John Gould. Nothing of animal life comes amiss to the ever-hungry Australians, who devour alike all mammals, birds, reptiles, fish, and insects. Their best supply is furnished by the family of kangaroos, of which Mr. Gould reckons near forty species of various genera, some weighing no more than two pounds, and some weighing two hundred pounds. We have then the wombats, or phascolumys of naturalists, and the bundicoots, or phalangista. These are followed by the great bats, "when," says Mr. Gould, "the natives can catch them." Fish taken by spearing, or by rude nets, are largely consumed, and a stranded whale is gloated on. Captain Grey, now Sir George Grey, says that it was "an unseemly sight to see an

Australian virgin issuing from the body of a whale, besmeared with oil, and bearing handfuls of blubber." Wild honey is, of course, in great request. But the Australians are indiscriminate, for among their dainties are the large caterpillars which feed on the wattle-tree, and the larvæ of a black ant. "I found," says Mr. Gould, "the caterpillars, when nicely roasted over a wood fire, very good; but the ants' eggs made me sick."

With the exception of the dog and a few mice, all the mammalia of Australia, whether herbaceous or carnivorous, and whether fossil or extant, belong to the inferior family of marsupials, or those in which the perfection of the young requires two distinct gestations, one in the womb and one in a pouch. This strange region of the earth was even more remarkable for the plants and animals which it wanted than for those it possessed. It had no cereal, no good esculent roots, bulb or tuber, or fruit amenable to cultivation. The coco-palm, the banana, and the yam, so general in all other tropical regions, did not exist in the tropical part of Australia. All the domestic animals which, by furnishing man with food or labour, are indispensable to the effectual advancement of civilisation, were absent. The race of man himself differed from all other races of mankind, and was the same lean, lank, black being over the 30° of latitude, which extends from 11° south of the equator to 43° beyond it, partaking of the same physical and intellectual inferiority which characterises the lower mammalia inhabiting the same land with him.

The Australians had attained the first elementary steps towards civilisation, for they had constructed language, had invented the art of kindling fire, and of cooking their food with it. They had acquired the art of fabricating rude tools and weapons, and had made the usual progress in the indispensable arts of hunting and fishing. With their admitted inferiority of capacity, and with the privations under which they laboured, it is difficult to imagine them to have been able to advance beyond the condition in which they were when first seen by civilised man, a condition which they may have reached long before the time when the Egyptians had constructed the earliest of their pyramids. They were doomed, in short, to stand fast after making the first elementary steps towards progress.

No race of man, however highly endowed, could have attained any considerable amount of social advancement in the inauspicious condition of the Australians, whose extreme savagery seems to have rendered all intercourse with races of higher quality and greater attainments, from whom they might have received instruction, impossible. This is attested by the fact that their many languages are not found to contain even a single word of those foreign tongues which, even in the languages of

their immediate neighbours, the Papuans of New Guinea, and in all those of the islanders of the Pacific, black or brown, exist in more or less number.

The inauspicious position in which nature placed the Australian race will account for the lowly condition in which they were found. Yet when we find other races of man placed under equal, or even greater natural impediments to progress, making greater advances, we are obliged to infer a special stolidness in the character of the Australians. The subject is of such ethnological interest that a few examples may with advantage be given in proof of the proposition I am now assuming, and I begin with the Esquimaux. Instead of the genial climate enjoyed by the Australians, they are condemned to the most rigorous one in which man can live. They have no vegetable food at all, and to supply the indispensable carbonaceous element, have to drink fish oil and bolt blubber. Their animal food was less various, and the animals which composed it more difficult of capture than those of the Australians, for it was not the kangaroo, the oppossum, or wombat that they had to deal with, but the seal, the walrus, the whale, and the polar bear. The only mammal that could live in the domestic state in their rigorous climate was the dog, but they trained it to far better purpose than the Australians, for they had made it a valuable assistant in the chase, and broken it in to draw their sledges. The stone and bone tools and weapons of the Esquimaux were far more skilfully fashioned than those of the Australians. With ample stores of timber, the Australian boat was by no means comparable to a Welsh coracle; while the Esquimaux, with nothing but driftwood to rely on, constructed stout boats, which they skilfully navigated in pursuit of the whale, the walrus, and the bear. Clothing and dwellings were, no doubt, more indispensable to the Esquimaux than to the Australians, but the Esquimaux had well-made clothing and warm houses, although their only fuel was fish bones, while the Australians can hardly be said to have had either clothing or houses at all. Such facts as these appear to be ample and satisfactory evidence of the relative intellectual capacities of the two races.

I think it is capable of satisfactory proof that even the pigmy Negroes of the Andaman Islands are intellectually more highly gifted than the Australians. Their position in the matter of physical geography is unquestionably more adverse. Thus, instead of the auspicious climate of Australia, they have a tempestuous one, in which it rains for half the year. As to vegetable food, they are without a corn, an esculent root, a bulb, or a tuber, and without an eatable fruit, for they want even the coco-palm and the banana, both which exist abundantly in all the countries nearest to them, east, west, north, and south, and

this at very moderate distances. Their vegetable diet, as far as we know, is confined to a coarse wild bean, and the unpalatable fruit of the mangrove, which the hogs of other countries would not partake of. The sole game of their dense and almost impenetrable forest was a small species of wild hog, difficult, under such circumstances, of capture. For animal food, therefore, they have to rely on molluscs, fish, and reptiles, and, as they have neither rivers nor lakes, they are driven to the coast and open sea in search of them. Their principal game is the turtle, and they are adroit in its capture. When first described by civilised man, the implements of the Andaman islanders were like those of other rude people, of stone, bone, or wood; but as soon as the wrecks of European ships presented iron to them, they dropped their celts or stone axes, and began to make them of iron, forging knives, arrow and spear heads of it, with hammers and anvils of stone, as no doubt did all races of man when they first began to substitute iron for meaner materials. Even from these few facts I cannot doubt but that the diminutive Negroes of the Andaman islands are mentally a more highly endowed race than the tall, gaunt, and unseemly Australians.

New Guinea is one of the largest, if not, indeed, the very largest island in the world, and at one point it is within sixty miles of the tropical part of Australia, its *Flora* and *Fauna* partaking in some degree of the character of those of the latter. It is, however, inhabited by a peculiar race of Negroes, whom we call, from the corruption of a Malay word which has the sense of "woolly," Papuans, a race wholly different from their neighbours the Australians, and one apparently superior to them in bodily and mental capacity. Many of them are, no doubt, in the lowest savage condition, but some, who have enjoyed better opportunities, have made such a rudimental advance as places them far above the Australians. Thus, although the Papuans have no cereal, they cultivate the yam, the coco-palm, the sago-palm, and the banana, while they have domesticated the dog, the hog, and the common fowl. They are frequently well housed, in barn-like dwellings, raised on piles like the lake villages of the primitive Swiss. They have acquired a knowledge of the preparation and use of malleable iron from the Malayan race, and they have stout boats in which they not only navigate along their own shores, but hold intercourse with the satellite islands of New Guinea, and occasionally venture on committing piracies in the seas of the eastern portion of the Malayan Archipelago.

There is satisfactory evidence to show that even the Negrito tribes of the South Pacific, albeit atrocious cannibals, are a race greatly superior to the Australians, for they cultivate the coco-

palm, the banana, the yam, the batata, and the esculent caladium, and had at least one domestic animal, the hog, the possession of which may, perhaps, have mitigated their propensity to feed on their own kind. They were clothed, not indeed in any woven tissue, but in what may be called a "vegetable felt," made with considerable skill from the paper mulberry. They were not houseless wanderers, but lived in villages; and they possessed boats, in which they sailed from island to island, of their own group.

But the most striking example of superiority of other races over the Australian, is to be found in a comparison between it and that brown race of man which has the same physical form and the same language from the Tropic of Cancer to New Zealand. When first seen, this race had already attained as high a social position as could consist with their privations and isolation. The countries they inhabited had generally the same climates as those of the Australians, and although the tropical portion of their country, being that in which their peculiar civilisation probably originated, had some advantage as to esculent vegetables over Australia, other portions were even worse off; while as to animal food, none of them had the variety or plenty possessed by the Australians. When first seen by Europeans, such of this race as dwelt within the tropics were no longer naked houseless wanderers, but men clothed in the vegetable felt already alluded to: they had fixed habitations, constructed with tolerable skill, and well-built boats skilfully navigated, in which they made voyages of several hundred miles, and in two cases, although probably compulsory, of several thousands, when they migrated south as far as New Zealand, and eastward as far as Easter Island, not above a couple of thousand miles from the western shore of America. They were found to be agriculturists, and already they were cultivating the coco-palm, the bread-fruit, the banana, the yam, the batata, and even the orange, while they were in possession of three domestic animals, the dog, the hog, and the common fowl.

That they did not repel, like the Australians, all intercourse and commixture with strangers in a more advanced state than themselves, is sufficiently attested by the fact that their language contains some essential words of the Malayan languages, among which may be reckoned the names of some tools and implements, the whole numeral system of the Malays, and the names of some cultivated plants, as those of the coco-palm, the yam, and the sugar-cane.

Even if we suppose all the plants cultivated by the brown Polynesians to be indigenous to the tropical islands, it is reasonable at least to infer from their Malayan names that it was strangers who instructed the natives in the art of cultivating

them. To strangers also we may safely infer they owed their three domestic animals, although they are not known under foreign names. We infer that they were imported from the fact that neither the hog, the dog, or the common fowl, are found in the wild state in any island of the Northern or Southern Pacific. With respect to the common fowl, more especially, it exists in no country, even Malayan, in the wild state east of Sumatra, Java, and the Philippines, in the forests of which, however, it is abundant, while in all these countries it has been immemorially domesticated. From one or other of these countries, it is reasonable to believe that it must have reached the brown race of the tropical islands of the Pacific.

Even with their scanty provision of vegetable and animal food, we can imagine a still higher degree of civilisation than had been attained to have sprung up among the brown Polynesians, had the physical geography of their country been more propitious. But the tropical islands in which their civilisation most probably originated were but scattered islets, too limited to give room for the growth of a nation by numbers and strength of sufficient power to maintain its own independence, and to afford leisure for cultivating the arts of peace. The only one of the islands of the Southern Pacific large enough to have done so was New Zealand, and it laboured under peculiar privations of its own. It had no good indigenous esculent vegetables, and hardly a mammal at all, and not even a bird amenable to domestication. It was a colony from the tropical islands, and the emigrants, therefore, could not transplant into their new abode any plant purely tropical. They took with them and propagated only such as would grow in the temperate climate of the northern island, as the yam, the batata, and the caladium. In the long and perilous voyage which they had to perform, they succeeded in bringing with them the dog only, and in a land where there was little suitable food, it did not multiply as it would have done under more favourable conditions, and it was consequently scarce.

In the absence of cultivable plants, beyond the very few they had brought along with them, the scarcity of all animals for food, and the absolute want of any amenable to domestication, it was impossible for the New Zealanders to have been anything else than what they were found to be, that is, arrant savages and systematic cannibals. However highly gifted, to have made any approach to the civilisation which Egyptians, Hindus, and Chinese had made thousands of years ago, was impossible. Had even our own forefathers, the Britons who in the time of Cæsar possessed corn and cattle, laboured under the same privations as the New Zealanders, they must, like them, have been savages and most probably even cannibals.

But we may indulge our fancy by contemplating what the fortune of the New Zealanders, left to themselves, might have been had they, like most of the races of the old world, but possessed cereals and other esculent vegetables, and a few of the larger quadrupeds for food and labour. The potato and the hog were bestowed upon them by Capt. Cook at the beginning of the last quarter of the eighteenth century; and they had already cultivated the first and bred the last so successfully in the first years of the present century as to be able to furnish them as provisions to European shipping. Ever since their virtual subjugation by a superior race at the highest point of civilisation, they have, with no inconsiderable success, adopted European arts and manners. With such capacity for advancement, being of one race, speaking one language, and occupying a large, rich, and almost continuous territory, with a temperate climate, may we not contemplate the growth of a civilised and powerful Maori nation? Under such auspices as I have supposed, the New Zealanders could hardly have failed in time to have discovered, as all the nations of the old world enjoying the same advantages had done, and this at many independent points, the art of making malleable iron. As with these the other useful metals would have followed; and as to gold, it was in the loose alluvial earth almost under their feet. In time, they would even have invented written language, as did many rude tribes of India, of Java, Sumatra, and the Philippines.

The people to whom the New Zealanders bear the nearest resemblance, in geographical position, in climate, in physical geography, and in extent of territory, are the Japanese, and we can fancy a Maori nation equalling the Japanese in civilisation and in number, remaining like them independent, and, like them also, with little communication with strangers. With equal advantages, we can fancy no such advancement in the Australians, who, although corn and cattle have been presented to them in abundance during three generations, have never grown a plant or bred an animal, but are now the same naked, houseless, wandering savages, living on the wild productions of the earth, that they were when first seen by civilised man.

It might seem at first view as if nature had formed the Australians on a low scale, to meet the poverty of the land in which they were destined to live, in the same manner in which it constituted the Esquimaux to live amidst perpetual ice and snow, where no other race of man could live. Yet, in this land, seemingly the predestined abode of irretrievable savages, there now live and flourish colonies of another race of man differently endowed, and which, in three short generations, have laid the foundation of a powerful and civilised empire.

IX.—*On the Propagation of Mining and Metallurgy.* By Hyde Clarke, Esq.

[*Read April 9th*, 1867.]

One prehistoric question is the supply of metals and diffusion of metallurgic processes. It is presumed that this must have been effected by a highly cultivated race, most likely the Phœnicians.

The subject is a wide one, and embraces many branches, and consequently admits of the attribution of more than one cause. All of these we may not, perhaps, find, but we may ascertain some of these causes. The history of the past is, to a certain extent, lost; but under some circumstances history repeats itself, and gives us representations of the past, just as a coin much faded on being heated will show for a few moments the obliterated legend. In some cases history is exhibited to us in the complications of ancient and modern institutions, which we see in the ruder empires; Turkey, for instance, where in the same plain the bullock cart of Homer and the railway locomotive are at work, the wooden plough of Hesiod and our latest steam plough.

One of the repetitions of history is sufficiently well displayed in Western Asia Minor. The mountains called the Besh Parmak, or Five Fingers, to the south of the Mæander river, opposite the ancient Tralles, or modern Aidin, contain extensive deposits of hæmatite iron ore in the form of iron sand. I have reason to consider these deposits extend along the mountains south of the Mæander for above one hundred miles, and that they are to be found in contiguous ranges to the north of the Hermus in the neighbourhood of Thyateira.

The Besh Parmak deposits are worked by gipsies or Chinganees. The workings are open pits and the mineral is smelted with brushwood in small furnaces of about a foot square. So far as I can ascertain, this resembles the mode of working followed in India. The iron, which is of good quality, is sold in the market towns of a wide extent of country by the gipsy men and women, chiefly in the form of horseshoes.

The Chalybes or Khalubes were, according to ancient historians, a mountain people in Asia Minor working iron, and spoken of from the mythic age down to a comparatively late historic period, when they were recognised in North-eastern Asia Minor.

The Khalubes were hill tribes, and so are the gipsies. The Khalubes most likely worked several sites in Asia Minor, and were a tribe engaged in this business.

The gipsies, as we well knew, are engaged in iron working in many of the countries in which they are settled, and it is one of their hereditary callings.

The gipsies within a few centuries spread over the whole of Europe, and might have introduced iron metallurgy. As we know, they did not, for they found it already established, but nevertheless they were in many instances able to engage in iron working.

If, during the middle ages, the gipsies were able to do this, we have evidence for the possibility of like tribes in a very few centuries spreading as far as from Mooltan or Kashmere to Spain, Britain, and Norway.

The migrations of a low tribe of this kind are very different in their character from those of a high or warlike tribe. The warlike tribes, whether grazing or seafaring, have made their migrations in great numbers, fighting their way by strength of arms and meeting foes at every step. A low tribe, contented with a low state of existence, perhaps family life in a filthy tent, will rather creep its way along, having little to be robbed of, being unprofitable servants and subjects, and robbing and cheating the populations through whose midst it passed.

As there are low parasites which pass through various forms and exist in different media, so it is with the low tribes; their conditions in migration may be very different from that in settlement, but they will migrate till they find their suitable parasitic abode.

To low metal-working tribes like the Khalubes and gipsies, we may look for one class of metal workers. The characteristic pursuits of low tribes are worthy of observation. Among those of low hill tribes I should place metal working, woodcraft, including timber cutting, and collecting honey and wax, and cattle feeding.

Gold working I consider to have been pursued very differently from iron working. It must have been much the same in all ages, an adventurous pursuit carried on in the style of the Spanish expeditions in hostile countries, or like Californian and Australian gold digging in thinly peopled countries.

Looking to the extensive supply of gold ornaments in ancient times, to the many known gold sites, and the present poverty of those sites, there can be little doubt that the diggings of Europe had been pretty well explored long before the historic period. The adventure of Jason and the Argonauts may be looked upon as the last of these expeditions, carried out on old traditions.

The Iberians, or the anterior races seated on their territory, must have pretty well exhausted the gold diggings. The Phœnicians I look upon as later participators in the commerce consequent on these operations. The Iberians of the east and their predecessors we must consider as the explorers of the Black Sea, and the Caspian, and their river systems; the Iberians of the west as the explorers of Gaul, Britain, and the Baltic. The real chronology of Phœnician nations will depend on the appearance of the Semitic race upon the theatre of the east, probably not much before that of the Indo-Europeans themselves, relatively later in the world's history than we have been accustomed to allow for. If it be true that the Iberians held the greater part of Asia Minor before the Hellenes, if, too, we can now by recent discoveries recognise an influence of Assyrian and not of Egyptian type in Asia Minor, so we must hesitate in acknowledging this influence as a primary action. The nationalities of the north and the south of Eastern Asia Minor show evident signs of displacement, and if we are to look upon the tribes of the Caucasus as allied to those of Central Asia, and displaced by Semitic and Indo-European invasions, then we may have to assign to the eastern border of the Iberians an extended and more ancient limit.

However this may be, whether the gold working of the Caspian were effected by an Iberian or a Caucaso-Tibetan race, the operation would always be the same in the first instance, surface workings by bands of explorers or marauders.

These might in some cases be succeeded by low races carrying on gold washing as in India, or by slaves as in Africa.

The gold diggings would, however, become poorer and poorer by exhaustion, and further supplies would be obtained at a later period by casual discoveries, or by the hard labour of gold working.

The supply of tin I look upon as contemporaneous with the supply of gold. Most tin grounds contain gold, and some gold countries contain tin. Cornwall still yields its grains of gold, and Australia and Peru afford tin. Tin is still in some examples found in the shape of dust as well as stones.

The scattered and outlying supplies of tin might first attract attention before the main supplies of tin in Spain and Cornwall concentrated attention for mining purposes. It is by no means essential to assume that these were primary centres, as the ready discovery of a small quantity of tin elsewhere may have caused search in the other formations. Armorica may have supplied tin before Britain.

Of the origin of copper mining it is less easy to form an idea. It is most likely that, as the metals gold and iron were known

in grains or sand, so copper sands first attracted attention, and that the exhaustion of the easily fusible minerals led to the adoption of the harder sulphurets and carbonates.

So, too, as to the origin of bronze, it is more difficult to suggest, and yet at a very early period the solution must have been effected.

Metallurgy once generally developed, the working of the readier forms of lead and silver lead ores is an easy stage.

There would be a wide difference between the rude metallurgy of the gold diggers, and the hill workers, and the more refined operations as surface supplies became less available, and the demands of civilisation were greater.

Then we reach another stage; slave and convict labour were extensively introduced, and vast enterprises were carried on year after year, of which we see the remains in ancient Spain, and know the mode of working in the mines of Southern America.

Iron may have been worked almost as early as copper, but, on account of its being found soft in the early manufacture, it may have been neglected like lead and silver, and like them postponed to other metals.

The same tribes may have been indifferently, according to geological location, copper, iron, or lead smelters.

The smelter once on the spot would not be readily displaced. The neighbouring chief would be contented with tribute in kind, and the shepherd or husbandman of the plain, with his women, would have small liking to change places with the miner and his grimy host.

X.—*On the Classification of the Races of Man according to the Form of the Skull.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read April 9th*, 1867.]

THE classification of the races of man according to the form of the skull began with the celebrated anatomist and naturalist Blumenbach, who published an account of it in 1775. Blumenbach considered all mankind to consist of a single species, which he called the Caucasian, under the belief that the most perfect type of man was to be found among the inhabitants of the Caucasus, a gratuitous assumption without the shadow of foundation. From this imaginary primitive stock, four varieties, which he denominates the Mongolian, the Ethiopian, the American, and the Malayan, have, according to his hypothesis, proceeded, through a process of degeneration. But, as these five classes would not include many races of man known even in the time of Blumenbach, he supposes mixed races formed by the union of the five principal ones, much after the manner in which the four primary castes of the Hindus have been multiplied to hundreds. The late Dr. Prichard added two races to Blumenbach's five, without at all improving his arrangement.

The theory of Blumenbach and his followers appears to me to be in no respect founded in nature, but, on the contrary, to be entirely arbitrary, and, as a test to distinguish the races of man, practically useless, and even delusory.

If the primary white stock, or Caucasian of the theory, became black in one quarter of the world, tawny in a second, yellow in a third, and copper-coloured in a fourth, we ought to have been told how these and other great alterations of physical form were brought about; but the author of the theory and his disciples are silent on the subject, contenting themselves with the unproved assertion that they have been the results of degeneration. From the little that we do know of the history of the human race, man has undergone no change in form or complexion for some five thousand years; and, therefore, the upholders of the Blumenbach theory must go to an unknown and unknowable antiquity for the origin of their varieties.

But what, after all, is the skull, that it should be considered to yield a character to distinguish the many races of man from one another? It is simply a portion of the skeleton, or hard rigid frame, which contains or sustains the soft fleshy parts of the animal economy which perform all the functions of life, but

which itself performs none of them. We can easily imagine all the functions of life, except motion, to go on without the bony frame, and in sleep they actually do so; while among several of the lower orders of the animal creation there is no skeleton at all. We may, if we please, consider the human skull as the noblest part of the skeleton, since it is the receptacle of the brain, or organ of thought; but still, it is no part of the brain itself, any more than is the casket the jewel of which it is the receptacle, since the casket may be of any shape or any material, without giving the least indication of the quality of the jewel.

The human skull is of no definite form, for it can only be described as irregularly subglobular. Besides being the seat of the brain, it is also the solid seat of the organs of hearing, seeing, smell, taste, and of the face itself, while it embraces the machinery for the mastication of food.

It is difficult to understand how the skull came to be selected for a test of race, unless it were on account of its being the most striking portion of the skeleton, and the facility and convenience with which a collection of crania could be accommodated in a museum. The founder of the skull theory possessed such a collection; and it has often occurred to me, that it was the frequent contemplation of it that first suggested to him a principle of classification which had never before occurred to anyone else.

To give an accurate and intelligible definition of an object so irregular and inconstant as the human skull was, of course, impossible; and Blumenbach's definition of the forms of his five classes are so utterly vague, that they might, with equal correctness, be applied to the skulls of a like number of the canine or simian families. Thus, in his primitive class, the Caucasian, the skull is described as "subglobular," in the Mongolian as "almost square," in the Ethiopian as "compressed at the sides with a knotty forehead;" while with the American variety, "the forehead is short and always broad," and with the Malayan, "the skull is moderately narrowed, with a forehead slightly swelling." The man who was content with such definitions as these must have entertained but a dreamy notion of the difference of form in skulls.

The impossibility of distinguishing the races of man, by Blumenbach's vague characters of the skull, was in time found out; and a new test, in my opinion just as unsatisfactory, has been invented, called the "Cephalic Index;" and I take my account of it from the highest authority I can quote on the subject—the skilful, ingenious, and eloquent Professor Huxley, who describes it, with its most recent modifications and im-

provements, in his account of "The Prehistoric Remains of the Kists of Caithness." By this test, all skulls are divided into two classes, the "long" and the "short." Skulls of which the longitudinal diameter exceeds the transverse in a certain proportion, are to be classed as "long," and to be designated by the Greek term "dolichocephalic;" and all that fall short of that proportion are to be classed as "short," having the Greek term "brachycephalic." The inventor of the "Cephalic Index" was the late distinguished Swedish professor, Retzius. It is singular, however, that the very inventor himself could not make up his mind at what point the long class should commence and the short one end. Speaking generally, however, he came to the conclusion, that when the longitudinal diameters exceeded the transverse by about one-fourth part, the skull should be classed as "long," or "dolichocephalic;" while if the excess did not exceed one-eighth or one-fifth, it should be classed as "short," or "brachycephalic." This was at once vague and arbitrary; but the followers of Retzius have attempted to give more precision to the Cephalic scale, and fix it at 8 decimal, making all skulls of which the longitudinal exceeds the transverse diameter beyond this figure to be "long" or "dolichocephalic," and all that fall short of it "round" or "brachycephalic." This means that the length is, in proportion to the breadth of the skull, as 100 to 80, or exceeds it by one-fifth part; while the inventor of the scale makes the proportion only as 100 in 75, or a fourth instead of a fifth part. The amenders of the Cephalic scale have subdivided it into no fewer than eight grades, three of them being short or brachycephalic, and five long or dolichocephalic.

The very terms in which the Cephalic Index is described proclaim it to be most dogmatically arbitrary and conventional, since a mere ideal line separates the round from the long skulls. The savages, who compress the occipital parts of their infants' heads, can convert long heads into short heads, and, in fact, have been in the habit of doing so for ages, without producing any appreciable change in body or mind.

The Cephalic Index, it is certain, would reduce all mankind to two classes—the brachycephalic or short heads, and the dolichocephalic or long heads; the only difference between them being in the degree in which skulls were respectively more or less short, or more or less long.

But the theory seems to me completely overthrown by the fact that, among most of the races of man, skulls are found of both descriptions. Of the seven skulls found in the kists of Caithness, and so carefully and skilfully described by Professor Huxley himself, five turned out (as tested by the Cephalic

scale) to be short, and five to be long. Now, the great likelihood is, that these skulls belonged to one and the same race of man, and, not improbably, that some of them belonged even to members of the very same family. Professor Huxley, in his description of the Caithness remains, refers to the examination, by eminent Swiss and German naturalists, of many Swiss and German skulls—ancient, middle-age, and modern; and I gather from it, that three-fourths of them come under the designation of short, while the remaining fourth belongs to the long heads.

The collection of skulls of the Academy of Natural Sciences of Philadelphia amounts to 575 crania of the aborigines of every part of the American continent; and they have been carefully examined by an experienced craniologist, Dr. Meigs. Among these are 245 Peruvian skulls, which afford, in my opinion, a very satisfactory refutation of the Cephalic scale. Of this number, 168 are brachycephalic or short-headed, 50 are dolichocephalic or long-headed; while 27 are mesocephalic, or neither the one nor the other, but an indeterminate form between the two, and to which the Cephalic scale is necessarily inapplicable. Such, then, is the disparity in the form of the skull tried by the Cephalic Index, with a people deemed to be of one and the same race, and generally speaking one and the same language. Thus the Cephalic test makes about 68 per cent. of the Peruvian skulls long, about 20 per cent. short, and about 11 per cent. indescribable.

The skulls of the African Negro give a predominance of long skulls, or dolichocephalic. On the other hand, the few skulls of the Andaman Negro that have been examined have turned out to be all short, or brachycephalic. The only race of man with whom the dolichocephalic or long skull is universally present is the Australian—a people widely different from the rest of mankind, bodily and mentally.

The predominant skull of the Malay, that is, of the people speaking such languages as Malay and Javanese, is short or "round;" but those of the Dayaks of Borneo—heretofore considered to be the same race of man, and certainly not distinguishable from them when they have been converted to the Mahomedan religion, and assumed the dress and manners of Malays—are pronounced to be "long." The prevalent skull of the tropical Polynesian, as in the example of the Tahitians and Hawaians, is pronounced to be "short;" whereas those of the New Zealanders, certainly descended from, and not distinguishable from them in any other physical form, are pronounced to be "long." The skulls of the Hindu-Chinese are "short," but so are the skulls of the Chinese, who are, bodily and mentally, a widely different race of man.

The value of the Cephalic scale may be judged by the wild deductions which its very author drew from its application. Prof. Retzius entertained the groundless speculation that the New World was peopled from the Old, although, but for the migration which was necessary to bring this about, there does not exist an iota of evidence, the savages who are imagined to have achieved the exploit being, by nature and necessity, almost as immovable as the plants and creeping animals of the lands they dwelt in. Dr. Meigs, himself a believer in the Cephalic scale, gives the following account of Professor Retzius' opinions on this subject. He traced, he says, the races of the New World, which he reckons to be three in number, to those of the Old, by the relative breadth to the length of the skull. The Esquimaux have brachycephalic or short heads, and so have the Chinese, and therefore Retzius concluded that the Esquimaux are of Chinese origin—the imaginary connecting link, in this case, being the Aleutian Islands. He concluded that the short-headed Americans, dwelling on that side of the continent which points to Asia and its islands, are of Mongolian origin; while he traced a connection between the dolichocephalic or long-headed Indians of that portion of America, to the extinct Guanches of the Canary Islands, to the Mauritanians, the Tuariks, and the Egyptians—races palpably different being thus made one through the magic virtue of the Cephalic scale! In adopting these most extravagant deductions of Professor Retzius, Dr. Meigs seems to have forgotten that he had previously examined, by the Retzius scale, the skulls of twenty-seven different Indian tribes, of North and of South America, as well of the eastern as of the western side of the continent, and that everywhere short skulls were found as well as long ones, although the latter were the most prevalent.

As a test for distinguishing the races of man, the relative length and breadth of the skull seems to me, in short, to be of no more value than would be the relative breadth across a man's shoulders to his stature, or of the breadth to the length of his foot. The length of the heel-bone of an African Negro is better evidence of his race than the narrowness of his skull.

The natural families of the lower animals are readily distinguished from one another by the form of the skull, the face included, and so is man from all other animals; but no one has attempted to distinguish the species of the lower animals by the skull, although their species are far more distinct from each other than are the races of man. On the contrary, the species of the same family of the lower animals are often so alike, that it is impossible to distinguish them from each other by their skulls, while it is easy to do so from their external characters,

and to find words to describe the difference. Thus, there are no characters sufficiently distinct to enable us to distinguish between the skull of the horse and that of the ass, or, indeed, between the skulls of any two of the equine family. The skull of the wild dog of India and of the dingo of Australia are not distinguishable from the skull of several species of wolf, of fox, and of jackal; but it is very easy to distinguish the living animals, by their external form, their coats, and their habits. It is not necessary to be a naturalist to enable one to say which is a lion, a tiger, a leopard, and a panther; but by their naked skulls they are not distinguishable. When the skeleton of a large fossil feline is exhumed in Europe—an animal which was the contemporary of an elephant and a rhinoceros, and fed on wild hogs and reindeer—one cannot tell whether it belonged to a lion, a tiger, or a leopard. The skull of the domestic cat itself is but that of a miniature lion or tiger. The brown bear, the grisly bear, and the white bear of the Arctic Circle are very distinct species, but they are not distinguishable by the form of their skulls.

How unavailable the form of the skull is as a criterion of the race of man it is easy to show. The Greeks, the Persians, and the Hindus have skulls which no one pretends to distinguish, and, in fact, their very similarity has been adduced as an argument to show that these three peoples, differing so widely from one another in complexion and mental endowment, are of one and the same race of man—one of the absurd and fallacious conclusions of the linguistic theory. The Hindu and the Arab are, indisputably, two distinct races, but no one will assert that there is an appreciable difference in the form of their skulls; and so it is as between the skull of a Chinese, a Mongol, a Tibetian, a Japanese, a Hindu-Chinese, and a Malay—all very different races of the human family.

Neither is the form of the skull to be relied on as a criterion of the intellectual capacity of the party to which it belonged. A great anatomist and naturalist has mistaken the skull of a Scotch sergeant for that of an African Negro, although the owner of the former, from his position, must have been above the level of his countrymen, and the owner of the last most probably not above the level of his. Lately there was exhibited, at the meeting of a scientific society which attaches a high value to naked skulls as a test of race, the skull of a Negro: it was that of a Kruman, one of the most docile and intelligent of the African Negroes, and frequently employed by European shipping on the pestilential West Coast in the performance of fatigue-duties. It was examined by a craniological adept, who pronounced it "a very debased skull as regarded its animal

characters; it was almost of as low a grade as the skull of man could attain." The party who presented the skull, and who knew the owner of it in life, happened to be present, and quietly observed that the skull, "whatever might be its characteristic developments, was that of an intelligent man, who had a very good temper," adding that "the Krumen are considered the most intelligent of the Negro tribes."

From the examination which I have now made, I must come to the conclusion that Blumenbach's theory, notwithstanding all the emendations which it has received, is still nothing better than a groundless hypothesis. As a branch of physical science, a classification of the races of man ought to have been founded on a large assemblage of facts, on which, by induction, a general principle might be established. Blumenbach pursued the very opposite course; for he formed his theory first, and then pressed the few facts he possessed into an agreement with it. Humboldt, in his *Cosmos*, points out this error in the system of Blumenbach and his successors. But Humboldt was a travelled naturalist, who had had experience of many races of man; while Blumenbach, however eminent his abilities, wanted all travelled experience, and seems to have founded his theory chiefly on the skulls in his own cabinet. The very names which he and his followers give to the classes into which they divided all mankind embrace, each of them, an erroneous and misleading generalisation.

Let a score of human skulls, indiscriminately taken, be submitted to the examination of the most skilful and experienced anatomist; and although he may now and then make a happy hit, it will defy him to distinguish them, generally, with any certainty. He will find among them, more or less long, and more or less round skulls, with more or less elevated nasal bones, and skulls with superciliary ridges more or less prominent. Such vague and ill-defined characters belong equally to several widely different races of man. Ordinary observers distinguish, without any difficulty, the skull of an infant from that of an adult, and the skull of an adult from that of an old person: we distinguish generally a female from a male skull, but in these cases the characters are usually strong and well-marked. It is the reverse with the alleged characters of the skulls of races, which are so vague and indeterminate as to be utterly beyond the power of discrimination. With the lower animals which make the nearest approach to each other, we do not even pretend to distinguish species by the form of the skull, while we readily do so by the hairy tegument—a resource which is wanting to us in man; since with him, the hair of the head, the breast, and body, are often undistinguishable as to quantity,

colour, and texture. If we add to these difficulties the perplexity introduced by commixture of races, and by the fact that man, of whatever race, has been, ever since he acquired the art of communicating his ideas in articulate language, learned the art of kindling a fire, and of fashioning a club—a domestic animal himself, and, as such, subject, more or less, to the varieties which arise from domestication, the impossibility of distinguishing race by the naked skull must appear wholly insurmountable. I conclude, then, that the classification of Blumenbach, notwithstanding the amendments of his followers, has, after a trial approaching to a century, proved wholly abortive, and that it is high time it were abandoned as a hopeless hypothesis.

XI.—*Visit to the Kibalan Village of Sano Bay, North-east Coast of Formosa. Including a Vocabulary of the Dialect.* By Dr. Collingwood, F.L.S.

[*Read April 9th*, 1867.]

On the 13th June, 1866, I visited Sano Bay, on the east coast of Formosa, in H.M.S. *Serpent*, Commander Bullock, proceeding thither from the harbour of Kelung. The object of this visit was chiefly the verification of some supposed dangers in the harbour, which is spacious and not difficult of approach, and, although little frequented, is of importance as the only available harbour upon the whole east coast of the island. Our visit acquired additional interest from the fact that there was believed to be a village in the bay, occupied by the aborigines of the island, whom we were anxious to meet with. We found four villages in the bay: the first and smallest upon the northern side was a mere hamlet of Chinese fishermen, consisting of half-a-dozen cottages upon the hill-side, their boats drawn up on the beach in front. Passing by this, we proceeded up the harbour, and anchored near a sandy beach, beyond which we could see some roofs of houses. All the rest of the bay had a desolate and lifeless appearance, the lofty hills sweeping down to the water's edge, generally densely wooded, and presenting an aspect of wildness, which accorded well with our belief that they were inhabited by the still savage aborigines of Formosa.

On the approach of the vessel, numbers of people assembled on the beach from the large Chinese village of Sano, attracted by the unusual circumstance: among them the *gamins* were conspicuous, capering about on the sand, while their more sober elders formed a long line in the background, squatting on their hams, and discussing over their pipes the cause of the phenomenon. As soon as we landed, we were escorted into the village by the crowd, and, on reaching it, were received by sundry explosions, which we were fain to consider a salute of honour. Sundry warlike-looking personages, armed with matchlocks, had turned out to meet the suspicious-looking strangers; but seeing us walking unarmed and amicably among the citizens, they fired their weapons harmlessly in the air for effect. They allowed us to examine their matchlocks, which we were told were manufactured at Amoy; and their ammu-

nition, consisting of very coarse powder, with a finer grain for the priming, and bullets—some round, some oblong, some rectangular.

We found nothing remarkable in this village, which was essentially Chinese in its dirt, its pigs, and its inhabitants—closely resembling in character the other towns of Formosa; but our attention was arrested by a woman, whose handsome and European-looking features, and peculiar voice, at once marked her as non-Chinese, and shewed her to be one of the aboriginal inhabitants. How she came thus domesticated among the Chinese we could not learn, but we heard from various quarters that a system of petty warfare is kept up between the two races, and that occasionally some of the women are carried off by the opposing parties.

The following morning we landed on the southern side of the bay, where we were to find the native village, of which no trace however was visible from the ship. We were met upon the beach by a number of men and women, who were in no respect, either of dress or feature, similar to the Chinese, and along with them, after the first expressions of surprise and curiosity, we entered the village. This is rudely walled, the entrance being through doors at either side, by which we passed into an assemblage of huts constructed chiefly of grass and bamboos. The grass is woven into a kind of trellis or mat, which is placed against the sides, while the chief part of the walls is constructed of upright sticks, the interstices being imperfectly plastered with mud to keep out the weather. The door is of bamboo, and fixed upon a rude hinge, the lower part revolving sometimes upon the bottom of an earthern cup, to give freedom of motion. The roof is a thick thatch of grass and herbs (in which a species of Turk's-cap lily is largely used), and is supported by bamboos irregularly disposed among it. At one end is often an overhanging shed, containing a supply of firewood, of which there is everywhere abundance.

The interior of these huts contained but little; a stone stove, and a square flat board in one corner, which did service for a bed—apparently for the whole family—appearing to constitute nearly the whole furniture. Articles employed in fishing might be seen stuck into the thatch, and a stool or two was to be found in most cottages. Besides these, a few small articles of convenience existed which could be found when required by the owner.

The occupants of these habitations were a fine race of people, much superior in good looks to the Chinese; their features being more regular and well formed, and their expression decidedly more intelligent. The complexion was olive, the eyes

wanting the obliquity so characteristic of the Mongol race, the cheek-bones less high and prominent, the lips somewhat thick, and the chin well turned, giving altogether a very pleasing expression, neither stupid nor savage. The hair was usually black, but sometimes had a decidedly reddish cast, and that of the women was luxuriant and tied with a loose knot, while the men had adopted the Chinese custom of shaving the forehead, though not so far back as the vertex, and wearing a pigtail. Their physical proportions were in many cases very striking, and among them we saw both men and women of stalwart proportions. Some of the young girls were decidedly pretty, and exhibited all the coquetry, the love of finery, and other characteristics, which distinguish the sex in general in other parts of the world.

The costume of these people was somewhat slight. The men were attired similarly to Chinese coolies, that is, usually in a simple pair of short drawers, to which in some cases a blouse was added. The dress of the women consisted of a sarong* or petticoat, folded round the loins and meeting in front, where it overlapped, but was not fastened. This petticoat did not reach so far as the knees, and the feet and legs were bare. A sort of loose jacket, open in front, completed their attire, though some of the matrons did not make use of this addition. The young children of both sexes were entirely naked. This, however, appears to be a costume not always considered necessary, and those who landed at the village early on the second morning report that the population was more scantily clad, the men being entirely naked, and the women wearing only a flap round the loins. Seeing, however, the strangers arrive, they retired with deliberation to their huts, closed the doors, and reappeared in the costume above described. The women possessed necklaces of beads, which they wore round their necks, and some of them had stone bangles round their arms; their ears were pierced in three or four places from the lobe upwards, though none of them seemed to have ornaments in them, except buttons, often of the commonest kind. Most of the young children had objects round their necks, such as coins, beads, or buttons.

It should be mentioned that, in most cases, the garments worn by these people were made from a cloth of their own manufacture. This was a stout material, the threads of which were usually arranged in a zigzag pattern, and of a whitish or

* Meaning literally a sheath or scabbard, but here that part of the dress of both sexes which covers the lower portion of the person, and is in the form of a sack open at both ends.—EDITOR.

bluish-white colour. Many of the younger girls were employed in spinning the thread from fibres of hemp; and the cloth was woven by the older women, in pieces about a yard and a half long and a foot broad; three of which pieces they were willing to dispose of for one dollar.

These people are called by themselves *Kibalan,* and are, I believe, known by the Chinese as the tame aborigines, in contradistinction to the raw savages which dwell on the mountains, and on the east coast more particularly. These latter are at deadly enmity with the Chinese; while the Kibalan live in close proximity, though isolated from them. An officious half-caste among them informed us that there was another village close by; so, guided by him, we proceeded about a furlong along the beach, but were rather disgusted to find it a Chinese village, differing in no respect from other dirty Chinese villages. Returning, therefore, to the Kibalan village, the name of which I believe is *Shek-fan,* we made known to them by signs that we were anxious to visit the mountains, and to meet with the savages. They, however, did their best to persuade us not to go, assuring us that we should be shot. On shewing them our revolvers, however, they seemed to think we should be safer; but, when we inquired for a guide, one and all declared that their throats would be cut if they ventured among the hills. After considerable parley, the sight of a dollar induced one to accompany us, and, having armed himself with his matchlock, we set out; our guide, however, taking good care to keep in the rear of the party. Crossing some paddy fields, and proceeding along a sandy bay to the southward, our path was arrested by rocks, while on our right was a range of hills covered with a seemingly impenetrable forest. On closer examination, however, we discovered a beaten track, and up it we climbed, through a dense vegetation of tree ferns, camphor trees, etc., among which were some beautiful flowers, and many gaudy butterflies, although the overarching trees shut out most of the light. We ascended a considerable distance, tracing the path, which, although faint, was evident, and marking the trees as we ascended; but no trace could we find of the savages of whom we were in search. At length, finding the path less and less distinct, and time failing, we gave up the chase, and descended to the Kibalan village. The track which we had followed, however, was so evidently a more or less frequented one, that, considering the dread professed by the inhabitants of the village of their savage neighbours, it is difficult to understand by whom it could have been used, unless by the mountain aborigines descending to the plain in search of supplies. Subsequent inquiries at Sano, as well as some

signs made by the Kibalans, elicited the information (whether true or false) that the aborigines of the mountains could not be reached under two days' journey from Sano Bay.

We unpacked our basket of provisions in the middle of the village, and were soon surrounded by the entire population, who pressed curiously about us, but withal civilly; and seemed to think our eatables not bad, particularly the loaf sugar, which young and old appeared to appreciate. Captain Bullock had brought with him some old numbers of the *Illustrated London News,* which he distributed among them; but I remarked that though all seemed anxious to get a leaf, they did not look at the woodcuts, but immediately folded it up and put it in some part of their dress—nor could I interest them by pointing out to them the most striking illustrations, which they did not appear to comprehend. They did not, however, show any lack of interest and curiosity in most things, and the men particularly most inquisitively examined every part of our dress, feeling its texture, looking into our pockets, and shewing by signs that they wished to see the interior of any box or bag we happened to carry. Nor were they content with looking once, but the same objects must be inspected again and again. The women more particularly exhibited a great anxiety to obtain as presents anything we could give them, particularly anything ornamental. The naval buttons were a great temptation, and over and over again they pointed to them, and intimated their desire to be the fortunate possessors of them. When denied, they would point to a young child and ask it for him, as though we could not refuse it. Darwin, I may observe, makes the same remark when speaking of the Fuegians. If the button was given under these circumstances, it was immediately fastened on a string and tied round the child's forehead. But so importunate were they, that I might have completely stripped myself and found candidates for every article I possessed. Notwithstanding this, however, and that they repeatedly put their hands into our pockets, not a single article was lost, and no attempt was made to steal, but upon its being re-demanded they never offered to retain any object whatever. After our meal was over, the empty bottles were eagerly sought after, and we soon learned that no more acceptable present than *a bottle* could be made to them. This, which they called *brasco,* and *tobacco,** were the only two things which they specially applied for. Nearly everyone, men and women, smoked; and almost our first greeting was a demand for *tobacco,* a word which they appeared

* Both words, no doubt, from the Spanish or Portuguese, *frasco* and *tabaco.*—EDITOR.

to have previously learned. A small plantation of tobacco grew and was in flower within the walls of the village, and in several places the leaves were laid out in the sun to dry. It is smoked by them in pipes about a foot long, which the woman sticks in her hair when she is not using it, and not unfrequently we observed them smoking a bundle of scarcely dried leaves, rolled up and forming a rude and uncouth cigar.

It will not be supposed, however, that they were without occupation. In many huts the men were asleep, but towards evening they might be seen with their nets wending their way to the beach. Others I observed engaged over some seething vessels, in which I found they were extracting oil from the bones of turtle. The women had, several of them, naked babies hanging to their bare breasts; others came in from the country with pruning-knives, and laden with large bundles of grass and lily straw, which they laid down to dry in the sun, and which it appeared was ultimately intended for the repair of the thatch. These women had cloths wound round their legs, as a protection while in the field, and broad bamboo hats hanging by their side for wear in the hot sun. Others were spinning thread or weaving cloth, while some were engaged in beating rice out of the husks, which they did by placing it in a hollow stone vessel, under which they put a mat, and then two of them beating it alternately with the end of a heavy bamboo. While some were thus engaged, the idlers allowed themselves to be amused by some of our party, who showed them little tricks, which caused hearty laughter, and which they tried their best to imitate. Seeing a revolver, they were very anxious to see it shot off, and stuck up a leaf upon a door to be shot at, which was done twice, upon which there immediately appeared two or three men armed with matchlocks, who had evidently turned out at the sound of the pistol to protect the community in case of need. This little incident seemed to prove that they were always on the alert, and gave colour to the general report that they, like the Chinese, are subject to the raids of the raw mountain savages, against whom they are always more or less prepared to defend themselves. This was also corroborated by the fact, that in the midst of the village a building was in course of construction, which was evidently of a defensive character. It was in a very unfinished state, having at present no roof, and the walls not all completed; but the loopholes in the walls of the finished sides, as well as the accounts of the natives themselves, showed for what purpose it was intended. Men were engaged in sawing wood, and doing other business of construction.

By the side of this unfinished building was piled a great

heap of tiles of a dark colour, and of a most rubbishy brittle character, which they had purchased of the Chinese for roofing their fort. It seemed the greater pity, inasmuch as the rocks of Sano Bay are of a slaty character, with very distinct cleavage; and, close by the village, slates might have been obtained by a little trouble and intelligence, and these would have answered the purpose better than the wretched tiles they were about to use. A herd of water-buffalos,* brought home late in the afternoon, repaired to a muddy pool in front of this building, and, with their characteristic timidity and stupidity, after eyeing us curiously for some time, they took alarm at some movement of one of our party, and bolting helter-skelter out of the mud, floundered over the heap of tiles, crushing numbers of them to pieces, and all but overset some of the native huts in their mad career. Besides buffalos, they have pigs (always black), Chinese dogs, Japanese cats with short twisted tails, and fowls.

The following morning a number of natives visited the ship in their boats, and, on bottles being shown to them, they eagerly demanded them. When thrown into the water, half-a-dozen men leaped after them, and vigorous swimming-matches took place for the prizes. They would also dive for buttons of any kind that were thrown in. Soon afterwards several boats, full of people of all ages and both sexes, came alongside and readily ventured on board. Indeed, one great distinction between these people and the Chinese was the entire absence of timidity on the part of the females, who, instead of running away and hiding themselves as soon as they are even looked at, showed the most perfect confidence and freedom from *mauvaise honte.* They immediately commenced eagerly inquiring for *brascos* (bottles), and as our supply of these desirable articles was limited (owing to the custom of throwing empty bottles overboard), considerable jealousy was excited among the unsuccessful competitors. There was no idea of barter, and perhaps it was our own fault that we obtained nothing in return for our valuable presents. A number of our visitors were induced to descend to the captain's cabin, where, as lunch was going on, they readily partook of the edibles, and made themselves quite at home. Captain Bullock good naturedly cut off the tassels from his cushions, which were immediately transferred to the hair of the native beauties. After going about the ship, and conducting themselves with the greatest propriety, they returned to the village. A little incident struck me as worth recording. One of the men passing the ward-room sky-light, where some

* *Bos bubalus.*—EDITOR.

of the officers were at lunch, looked down, and lingered, when he was pulled away gently by another man who was with him. It was a slight movement, but *Chinamen* would have remained and stared till their eyes started from their heads before such native politeness would have occurred to them.

Mr. Sutton, chief engineer, who is an experienced photographer, took his camera on shore, and succeeded in taking several excellent stereoscopic pictures of the village and its inhabitants. The people readily acceded to the desire that they should sit, and several picturesque groups were formed, some of which were successfully fixed by the camera: of course it was very difficult to keep them all quiet, and impossible to make them comprehend the necessity of absolute stillness during the critical moments. The result, however, was in several instances very satisfactory.

The attempt to learn some of their words, and to form as good a vocabulary of their language as the time would permit, was met by perfect good will on their part; and many words, as well as their mode of counting, were obtained, chiefly from the women, who appeared to take considerable interest in imparting the information. Considerable amusement, too, was excited by our mistakes in pronunciation, etc., and our efforts elicited a considerable show of intelligence on their part. We found the women much more serviceable than the men for this purpose, chiefly on account of their clear pronunciation, which was much more distinct than that of the men. Thus, for example, the attempt of the women to pronounce English words was much more successful than that of the men. The word "flint," for instance, being given them, a man would not approach it nearer than *plin-iss*, while the women at once said *fil-lint*. The voice of the women was remarkably agreeable, having a plaintiveness and softness which were really striking, and sometimes sounded more like a gentle singing than speaking.

We looked in vain for any indication of their religious ideas. Over the door of the village, by which we entered, some one had stuck a joss paper, after the manner of the Chinese, and probably some Chinese had done it, but there were no joss-houses or temples in the hamlet, nor did we find any in the houses, though among the poorer Chinese almost every house has a little altar to the lares in the principal room. We inquired as well as we were able of the inhabitants on this point, but were able to elicit nothing from them.

With regard to their diseases, we had no means of learning anything of the mortality of the village. One young woman appeared to be recovering from small-pox, and one old woman

was covered with a skin disease, which gave her a leprous appearance, but the people in general were healthy-looking and physically strong, hardy, and well made. We observed no deformities among them, with the exception of one child of three or four years old, which crawled nimbly about on its hands and knees, and appeared to be physically unable to stand or walk. The village may have contained, at a rough estimate, two hundred and fifty inhabitants. There were plenty of children, but old grey-headed persons were not numerous.

In conclusion, I think it is evident that the race of people inhabiting this village is distinct from the Chinese. Among the women, particularly, there was scarcely one who had a Chinese feature, and their habits and modes of life also differ considerably. The feet were in no instance bandaged, as is universally the custom among the neighbouring Chinese. With regard to the men, it was not always so easy to discriminate, although in many, or rather most, instances, the Kibalan man was bigger and more stalwart, and with a cast of features superior to that of the Chinese. Some of them may have been half-castes, but I am of opinion that the majority of the inhabitants were of pure aboriginal descent, though how they became separated from the mountain savages, and the process and reason of their domestication, I have no means of knowing. Their present isolation in their own special village in a great measure accounts for the apparent purity of their blood. They were in all respects a more intelligent and more engaging people than the Chinese of Formosa, though these latter affect superiority. Thus, when I inquired of a man in the Chinese village of Sano, who I imagined had a dash of Kibalan in his face, if he belonged to that race, he replied, "No, I am a *man*" (that is, a *Chinese*), "not a foreigner."

I append to this a vocabulary of words used in this village; and a comparison with a similar vocabulary of words used by the South Formosan aborigines exhibits a very great similarity between them, proving beyond a doubt the identity of the two races.*

* The vocabularies here referred to have, unfortunately, not come to hand.—EDITOR.

XII.—*On the Skin, the Hair, and the Eyes, as Tests of the Races of Man.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read April 23rd*, 1867.]

THE skin, hair, and eyes, taken either separately or conjointly, form but a very inadequate and ambiguous test of the races of man, seeing that some of them are, in reality, common to several races in all other respects widely different. Many of the species of the lower animals in the wild state are distinguishable by the mere colouring and texture of the pelt or hairy covering of the skin; but we have no such assured characteristics to rely upon with the races of man. Comparing the effects of colour as a test of race between man and the lower animals, it will appear that in man it is exhibited only in the naked skin, which is essentially the same in all mankind; whereas, with the lower, it is expressed through the more definite and distinct media of hair, fur, down, and feathers.

To begin with the complexion or colour of the skin, which, in so far as the integuments are concerned, is the most conspicuous distinction of race. It is white of many shades in Europe, including the neighbouring portion of Western Asia, or what may be called ethnological Europe. We have no evidence, and no ground to believe, that a black or brown native race ever existed in Europe, or a native white race in any other part of the world.

The prevailing colour of the races of man of Africa and its islands is black, and the only exceptions are the Egyptians and the Mauritanians or Berbers at the extreme northern, and the Hottentots and Bushmen at the extreme southern, limit of the continent—the two first being of a brown or tawny, and the last of a muddy yellow colour.

In Western Asia, after leaving the white race, the prevailing complexion is a light brown, as in the example of the Persians, Arabs, and Turks. The only native black race of continental Asia is the Hindu, and this with various shades extends from Ceylon to the Himalaya mountains, and from the Indus to the Ganges; neither latitude nor elevation of land making any appreciable difference, for the Hindus of the Punjab are as dark as the Hindus of Cape Comorin. Between India and China, the continent of Asia is inhabited by a race of dark brown complexion, including the Burmese, the Siamese, the

Cambojans, the Anamese, with many minor tribes, who all agree in this attribute.

To the east of the country of the Hindu-Chinese, the race just referred to, the complexion is a brownish-yellow, and this includes all the inhabitants of China, of nearly the whole Japanese Archipelago, of Corea, and of most of the nations and tribes of Tartary.

The prevailing colour of the races of the Malayan and Philippine Archipelagoes, and of the islands of the North and South Pacific, is brown; but here we have black races also, as in the Negritos of the Malayan Peninsula, and those of several of the Philippine Islands, in the Papuans of New Guinea, and in the various Austral Negroes of the Pacific, extending from New Guinea all the way to the Fiji Islands, but which at this last point ceases entirely, nor does the black colour appear at all to the northward of the equator.

On the continent of Australia — including Tasmania, the only considerable island annexed to it—the sole colour of its inhabitants is black. No native white or brown race is ever known to have existed on it.

The universal complexion of the people of America and its islands, until at the northern extremity of the continent we come to the Esquimaux, whose colour is nearly the same as that of the Chinese, is a reddish-brown colour, often likened to that of copper. No black, or white, or light brown native race has ever, that we have any record of, existed in America or its islands.

In each of the colours that I have ascribed to the different races of man there are many shades, which it is wholly impossible to distinguish by any definite and intelligible words, and I have, therefore, made no attempt to do so.

As to the hair of the head, of the face, and of some other portions of the person, in so far as colour is concerned, it usually follows that of the skin. Man, it may be observed, is the only land mammal with whom the hair appears only partially here and there, as if for mere ornament, while with the lower animals it is distributed over the whole body, forming a covering indispensable to their existence, man being left to clothe himself, as a necessary exercise for his ingenuity.

Variety of colour in the hair is a distinguishing characteristic of the races of ethnological Europe, and rarely belongs to others of the races of man. With the man of Europe we have it of every shade of colour, from flaxen fair to crow black. Thus, we have golden yellow (the *Rutila coma* of Latin writers), yellow, red, pale red, auburn, chestnut, and brown of several shades. The children of the same father and mother will often

afford examples of several of these varieties. In texture, the quality of the hair of the head in the European race is generally fine, soft, and silky, and curls or buckles.

With all the races of man besides the European, the prevailing colour of the hair is an uniform black. This applies, with some exceptions, to the Persians, the Arabs, and the Syrians. It is invariably so with the Hindus, the Hindu-Chinese, the Chinese, the Japanese, the races of Tartary, the Malays, the races of the Pacific islands, whether black or brown complexioned,—of Australia, of America, whether red men or Esquimaux, and of all Negroes, whether occidental or oriental.

With the races now enumerated, however, there is in some cases a very wide difference in the texture or quality of the hair. With the Hindu, the Hindu-Chinese, the Chinese, the Japanese, the Malays, the Mongols, and other races of Tartary, with the fairer races of the South Sea Islands, and with the two races of America, the hair of the head is black, lank, and coarse, and this without any material or appreciable difference of quality. With the African Negro, the hair of the head is short, crisp, partakes of the texture of sheep's wool, and covers the whole scalp. With the Papuan Negro, and the Negroes of the Pacific islands, the hair of the head grows in separate curling tufts, and is capable, by stretching, of considerable elongation. With the Australian the hair of the head is long and coarse, and buckles.

With respect to the hair of the face, or beard, no race of man can be said to be absolutely destitute of it; but with many it is so scanty as even to be deemed by themselves not only not an ornament but even an incumbrance, and therefore often carefully extirpated. With the races of Europe, the Persians, the Arabs, and the Hindus, the beard is more or less abundant. With very inconsiderable exceptions, whether in the Old or New World, scanty beards are the rule. They prevail from the eastern confines of Hindustan to Japan, including the Hindu-Chinese race, the Chinese, the Tartaric tribes, the Malays, the fairer islanders of the Pacific, and all the native Americans, whether red men or Esquimaux.

The few exceptions to the rule of scanty beards, among the races just referred to, are easily reckoned, and, indeed, are sometimes to be seen in juxtaposition to those races with whom the beard is deficient. The Australians have abundant beards, and so have the Papuans and other Austral Negroes living close to, or even among, the Malays and fairer South Sea Islanders, who are almost beardless. Close to the scantily-bearded Japanese are the Kurile Islanders, with large beards,

and altogether an eminently shaggy race. With these may be included the natives of Yesso, the largest of the islands of the northern part of the Japanese Archipelago. The people of this island are a totally different race from the Japanese, and, indeed, but a comparatively recent conquest of the latter. These are the people just now exhibiting in London as curiosities of shagginess, under the designation of the "Hairy men of Yesso." The bare enumeration now given of inferior races with ample beards, in the neighbourhood of superior races with hardly any beards, will be sufficient to satisfy us that the beard is no evidence of vigour or manliness, as those possessed of it would fain have us to believe.

As to the eye, it in a great measure follows, as to colour, the complexion. With the races of ethnological Europe, like the skin and hair, its characteristic is a variety which obtains with no other race of man. We have here the grey, blue, hazel, brown, and black eye; while with most of the other races of man it is either a deep brown or black. With respect to position, the eye is more or less deep-seated, or more or less prominent, properties which do not appear to be characteristics of any particular races. The position of the eye is more characteristic, but neither is it appropriate to any particular race. In the European races and those of Western and Central Asia it is horizontal, while with the Chinese and races of Tartary it lies obliquely in its socket, the inner angle being elevated, while the outer is depressed. This character, however, belongs more or less to other races equally with the Chinese, so that it is not of much value in the discrimination of races.

As to the question of variety of colour in the skin in the races of man, its apportionment is evidently a mystery beyond our reach, just as much as is the variety and distribution of colours in the different species of the same genera of the lower animals. Some have fancied that colour in man depends on climate, or that a powerful sun makes the complexion more or less black, while a weaker one leaves it to improve in fairness in proportion to its feebleness. This popular error arose out of the narrow experience of our ancestors. It is a fact that the races of Southern Europe are generally of darker complexion than those of the north. Dark complexions diminish until we reach the people of Scandinavia, when the fair skin attains its acmé. After this, however, it becomes darker as we leave the sun, up to the polar circle. The Finns are darker than the Norwegians, and the Lapps darker than the Finns, while the Esquimaux are as dark as the Malays whose home is about the equator. The Hindu is of the same black colour

from Cape Comorin to the foot of the Himalaya mountains, and from Peshawar as far as the borders of Assam and Arracan, that is, over 26 degrees of latitude and 24 of longitude. The Tamils of Cape Comorin are certainly not blacker than the pure Hindus of the Punjab and Peshawar. On the western side of the Gulf of Bengal we have the black Hindu, and on the eastern, in the same latitude, and at the same elevation above the sea level, we have the brown Burmese and other Hindu-Chinese races.

The Chinese are of the same brownish-yellow from the fifteenth degree of latitude to the fortieth, neither fairer to the north, nor darker to the south. The Malayan race is of the same brown complexion from Sumatra and Borneo under the equator up to Luçon in the Philippines, extending to the eighteenth degree of north latitude. The fairer Polynesians of the South Pacific are of the same complexion from Rutumah in about the twelfth to the southern extremity of New Zealand in the forty-sixth degree of south latitude. In the same Southern Pacific we have two distinct races, namely, a Negro, and a non-Negro race, the one black and the other brown, occupying islands in proximity to each other, and in the same parallels of latitude.

On the continent of Australia the native inhabitants are of the same unvarying black, from Cape York, in the eleventh degree of latitude, to Tasmania, in about the forty-third degree. We have here, then, exclusively a black complexion; while in other parts of the world, with corresponding climates, we have respectively, fair, brown, yellow, red, and black complexions.

The red man of America and its islands is, with some mere shades of difference, essentially of the same copper colour from Tierra del Fuego to the confines of the Esquimaux, and from the shores of the Atlantic to those of the Pacific. It is not asserted that he is fairer fifty or sixty degrees from the equator than he is at the equator itself, nor does an elevation 10,000 feet above the sea level make any change in his normal complexion.

Such incontestable facts as those now stated dispose at once of the hypothesis of climate being the cause of colour in the human complexion. If, then, the variety of colour be not the effect of climate, from what cause is it derived? This is one of the inscrutable mysteries of nature, which we cannot solve any more than we can account for the varieties of colour in the species of the lower animals. The lion and the tiger are two species of the same natural family, sometimes seen in the very same forest, and they are readily distinguished by their pelt or fur, but by no other means; for, deprived of it, they are not

distinguishable either by external form or anatomical structure, nor do they materially differ in size or habits. We cannot tell why the one should be uniformly fulvid and the other invariably striped. One species of fox is black, another white, a third grey, and a fourth rufous; but we can assign no reason for these differences, which make the only essential ones between them. The polar bear is always white, while no other bear ever is so. The swan of Europe is always white, and a black swan was long thought to be a bird contrary to nature; but the swans of Australia are all black; and a native of Australia might have fancied a white swan as unnatural as a native of Europe once did a black one. Nature has made colour a distinction of species in the lower animals, and it has done the same, although less definitely, in the races of man; and in both cases we are equally ignorant of the grounds on which it has done so.

XIII.—*The Darien Indians.* By Dr. Cullen.

[*Read May 7th*, 1867.]

The whole length of the narrow neck of land which forms part of the United States of Columbia,* and extends from the continent of South America to Costa Rica, was formerly called the Isthmus of Darien. Of late, however, the name of Isthmus of Panama has been given to the western half, which contains Aspinwall, or Colon, and Panama, the termini of the Panama railroad, whilst the old name is still retained by the eastern half. The latter constitutes the Canton of Darien, the boundaries of which, as fixed by a decree of Congress, dated Bogotá, August 7, 1847, are, on the north, the Atlantic; on the east, the Atrato, from its mouth to the confluence of the Napipi; on the south, the Pacific, the course of the Napipi, and a straight line from its source to Cupica Bay; and on the west, the river Chepo, or Ballano, and a straight line from thence to Mandinga Bay and Cape San Blas. This last boundary separates it from the isthmus of Panama. This territory, which is about two hundred miles in length, with an average breadth of sixty miles, is covered throughout with a dense and trackless forest, unbroken except by the courses of numerous rivers, and is traversed by the Cordillera, which runs parallel to the Atlantic coast at the distance of from three to six miles. The villages of Yavisa (the cabecera or capital), Pinogana, Molineca, Real de Santa Maria, Chapigana, Tucuti, Camoganti, Garachiné, and Chiman, and the hamlets of Cupica and Jurador, inhabited by Negroes who speak Spanish and are citizens of New Granada, are the only settlements in the south of Darien, and their aggregate population only amounted to 1485 souls in 1851. The Atlantic coast, and the country for about ten miles inland, is sparsely inhabited by the Darien, San Blas, or Mandinga Indians. The rest of this isthmus is totally uninhabited.

The Darien Indians call their tribe *tooleh*, a word signifying "people;" but those dwelling on the tributaries of the large

* On the 18th of July, 1861, during the last civil war, which raged from 1859 to 1863, the title of the republic of New Granada was altered to that of the United States of Columbia, by a decree of General Tomas Cipriano de Mosquera, then provisional President, and commander of the liberal forces. General Mosquera was elected President in the spring of the present year.

river Chuquanaqua are called Cunas or Chucunas. Their small settlements are scattered, at great distances from one another, at the mouths of the rivers Mandinga, Carti Chico, Carti,* or Cedar, Rio Diablo, Rio Azucar, Concepcion, Playon Grande, Playon Chico, Rio Monos, Pitgandi, Cuiti, Putrigandi, Navagandi, Sassardi, Carreto, Gandi, Tripogandi, Tutumati, and Tarena, which fall into the Atlantic from north-west to south-east, or from Cape San Blas to the Atrato. Their settlements inland are near the sources of the Chepo, Uslucapanti, Moreti, Asnati, Sucubti, Chueti, Jubuganti, Ucurganti, Tuquesa, Jupisa, Pucro, and Paya, which rise in the Pacific slope of the Cordillera. During the turtle-fishing season a few huts are also occupied by them on some of the coral cays with which the coast is fringed. These belong to the archipelago of Las Mulatas, which consists of an immense multitude of islets, cays, reefs, and shoals, extending from Isle of Pines and Bird Islands, a little north-west of Sassardi Point, to Cape San Blas. Between them and the mainland there is a continuous series of secure harbours, with very deep water and safe channels for entering them.

At Cape San Blas, the Isthmus of Darien and the territory of the Indians ends, and the coast of the Isthmus of Panama commences, extending from thence westward to Portobello, Aspinwall, Chagres, etc. Between the Cape and Portobello, a distance of forty-five miles, the only inhabited places are the hamlets of Culebra, Palenque, and Nombre de Dios (founded by Don Diego de Nicuesa), which have an aggregate population of one hundred and fifty Negroes, descendants of *çimarrones*, or Spanish maroons.

The Darien Indians were never subdued by the Spaniards, and their independence has been recognised by the government of New Granada. They do not allow any official or citizen of New Granada to reside in their territory, nor do they permit any of the people of the Granadian villages in the south to cross over towards the Atlantic, to which side they strictly confine themselves, claiming no part of the isthmus south of the upper course of the Chepo and the Chuquanaqua, that is, between those rivers and the Pacific. So severe are they on trespassers, that in 1850 they killed four Negroes whom they found fishing too high up the Chiman; and two years later they killed five negroes whom they caught hunting within their territory. They always bore great animosity to

* The termination *ti* or *di* signifies a river, as *dó* or *dor* does in the Chocó language. Thus the river Seteguillegandi, on the east side of the Gulf of Darien, is called Karacuarandó by the Chocó Indians.

the Spaniards, and used to make it a point to kill any of that nation who happened to fall into their hands. Patterson, in his Report to the Directors of the Scotch colony of 1698, says of them: "They expressed a wonderful hatred of the Spaniards, and seemed not to understand how we could be at peace with them." "They pressed us hard," says Mr. Rose, one of the colonists, "to come and live by them, as also jointly to make war on the Spaniards, whom they would engage, if we would but assist them with one hundred men, to drive not only out of the mines, which are but three days' journey from us, but even out of Panama itself." Benzoni, after detailing the manner in which the Indians used to treat their prisoners, viz., by tying them up and cutting off pieces of their flesh to roast, remarks: "They say now that it is not wholesome to eat a Spaniard that way, because the flesh is too hard until it has been steeped for two or three days." They used to be at war with the Indians of the adjacent province of Chocó, keeping up an enmity which was handed down from father to son, and arose from the circumstance of one of them having, at the end of the seventeenth century, put to death a Spanish curate, who was held in great esteem by the Chocoanos, which tribe was at an early period reduced and converted to Christianity. Whilst that feud lasted, it was customary with the Chocoanos to use the skulls of their slain enemies for drinking bowls.

The Darien Indians were very friendly of old to the English and French buccaneers, whose allies they were in many incursions against the Spaniards. Their kindness, however, did not always meet with a proper return, as appears from the following despatch from Sir Charles Wager to Admiral Vernon, written July the 9th, 1740, not long after the taking of Portobello: "I am told that the trading ships or privateers have behaved in such a manner to the Darien Indians, by abusing their women and carrying some of the men to Jamaica and selling them for slaves, that we have lost their friendship, and that they have, for that reason, made peace with the Spaniards, and will join with them against us when they have the opportunity; and that we have done the same to the Mosquito Indians. If it be so, it is an abominable thing, but not unlike that sort of Englishmen. I hope our troops will behave better."

They are at present very friendly to the English and the Americans, *but nevertheless do not permit them to land on the coast.* As soon as a vessel anchors it is boarded by the traders, who bring off their produce themselves, and do not allow the captain or crew to land. It was on this account that, in 1853, when the Atlantic and Pacific Junction Company of London appointed a staff of engineers to survey the line from Caledonia

harbour, on the Atlantic, to the Savana river and the Gulf of San Miguel, on the Pacific, which I had, from explorations made in 1849 and the three following years, recommended as presenting singular facilities for the opening of a ship canal communication between the two oceans, I advised that Company to instruct them to proceed to the Atlantic coast, in order to ask the consent of the Indians to the proposed survey. This was accordingly done, and the Indians, having given their consent, offered no opposition to any of the exploring parties. On the same account I represented, in precise language, the very great danger that would be incurred by any party that might proceed from the Pacific side, and arrive near the Atlantic before such consent had been obtained; and therefore advised that no exploration should be made from that side until *after* the engineers had crossed over from the Atlantic to the Savana. It was, then, with the greatest surprise that, immediately after our arrival in Caledonia harbour, we learned that Commander Prevost, of H.M. steamer *Virago*, had started from the Savana *six weeks before*, and, after an unsuccessful attempt to reach the Atlantic, had sailed off again on his way back to Callao,* in Peru, *nearly three weeks before* our arrival. Of this unaccountable proceeding, so totally at variance with the arrangements made in London, we were informed by a letter which he sent to the commander of the ship of war in Caledonia harbour, and which was forwarded *viâ* Panama to Aspinwall, where the consul chartered a small vessel to convey it to its destination. In that letter he stated that the Indians had murdered four of his sailors, and he called upon the commander to demand full satisfaction from the Indians of the coast. Upon my questioning the Indians on the subject, they said that four men from Moreti having found the four sailors with arms in their possession, supposed them to be Spaniards, and put them to death in accordance with their law. When I remonstrated with them upon the barbarity of such a law, they promised to speak to the chiefs on the subject. Soon afterwards a meeting was held, at which the law was repealed, and the chiefs caused the murderers to be arrested, and offered to send them to Panama for trial. In the exploration which he made, Prevost, with fourteen officers and sailors, and some Negro macheteros, or bush-cutters, advanced nineteen miles from the Savana in eleven days, cutting a path as he went, and reached the bank of the Chuquanaqua, seven miles north of the canal line. Although he had previously seen tracks of

* On his arrival at Callao, he was superseded, and the admiral sent the *Virago* back to the Savana under Commander Marshall.

Indians, and had heard some shots fired, he left there four men in charge of the arms and ammunition of the whole party, and proceeded on his course with the remaining ten men. Returning to the same place four days afterwards, he found that the unfortunate men had been murdered, and the arms carried off; and thereupon retraced his steps, traversing the distance to the Savana in eleven hours by the path which it had taken eleven days to cut. In this exploration he was guided by Messrs. Kennish and Nelson, engineers of the Atlantic and Pacific Ship Canal Company of New York, which had started in opposition to the London Company with the object of cutting a canal *viâ* the Atrato, the route recommended by Humboldt on the authority of the Biscayan pilot, Gogueneche. Those gentlemen, who had never before set foot on the isthmus, guided Prevost four points and a-half north of the line, and led him to the top of the highest mountain of the Cordillera, to show him where a canal could not be cut. They, perhaps, could have explained that which puzzled the London Company so much, viz., why it was that Prevost went so long before the appointed time, and why he was in such a hurry to cross the isthmus.

In like manner, the engineer-in-chief of the London Company, placed himself under the guidance of Colonel Codazzi, who, although in the service of the New Granada Government, was also in receipt of pay from the New York Company. By that experienced bushranger he was led out of the right way, and over a mountain, which would require to be tunnelled, although I offered to guide them to a valley through which a canal could be made by open cutting.* However they would not take the direction indicated by me, probably not wishing to find a valley; and it was left to Commander Parsons, of H.M. surveying ship *Scorpion*, to solve the question, the entrance of the valley being marked in his *Survey of Caledonia Harbour and Port Escoces*, published by the Admiralty in Sep., 1854; whilst view 3 on his chart shows how completely distinct are the two parallel ranges of the Cordillera, between the overlapping extremities of which the valley is situated.

Unfortunately, however, some months before Parsons' *Survey* was published, Mr. Gisborne had returned to England with his Report, in which he ignored the existence of a valley, and stated that a tunnel, three miles in length, would be necessary

* See my pamphlet, "Over Darien—Reports of the Mismanaged Darien Expedition; with Suggestions for a Survey by Competent Engineers, and an Exploration by Parties with Compasses." London: Effingham Wilson. 1856.

through the mountain, which, as I learned from the Indians, is called Agla. His Report, which has never been published, and which was addressed to Lord Wharncliffe, the Chairman of the Atlantic and Pacific Junction Company, 36, Moorgate-street, and dated "H.M.S. *Espiegle,* Caledonia Harbour, April 4, 1854," is completely stultified by the following concluding sentence: "I am quite aware that, in now concluding my surveying operations, there is a great deal of interesting information still wanting, and that my examination of the isthmus is not near so perfect as I had hoped to make it." This, indeed, had been so manifest, that Commander Parsons, writing to me some time afterwards, says, in allusion to the lowest summit level given by Mr. Gisborne: "*Of course I shall not consider the matter thoroughly settled until further search is made.*"*

The same opinion of the imperfect and partial character of the inspection of the country then made was expressed by Baron Humboldt, M. Malte-Brun, and M. Michel Chevalier. More recently, J. Gerstenberg, Esq., F.R.G.S., in the discussion on Mr. Oliphant's paper on the Bayanos river, read before the Royal Geographical Society on the 24th of April, 1865, said: "The only route that I believe to be practicable is the Darien route. . . . . Dr. Cullen and Commander Parsons have stated that there is a valley running through the main ridge to Caledonia harbour. . . . . The only point to be settled is the existence of this valley, which subsequent explorers failed to find, because they did not wish to find it, owing, as I believe, to the jealousy of the Panama Railroad Company and of the *concessionaires* of the *Atrato* route, who had rival interests, and consequently did not desire that the valley should be found. In the hydrographic map of Parsons' *Survey* he gives several views of the Cordillera, and view 3 clearly shows that the Cordillera at that point is not an uninterrupted chain, but is broken into two separate and distinct ridges, between which a valley may naturally be expected."

Mr. Gisborne's Report on the necessity of a tunnel of three miles, arriving just at the outbreak of the Crimean war, determined the Directors to dissolve the Company, whereupon the project fell to the ground. Since 1854 it has lain in abeyance until January last, when the government of the United States sent a party of explorers and surveyors to make a thorough examination of the line, the result of which will most probably be that a canal can be cut from Caledonia harbour to the Savana river without any necessity for a tunnel.

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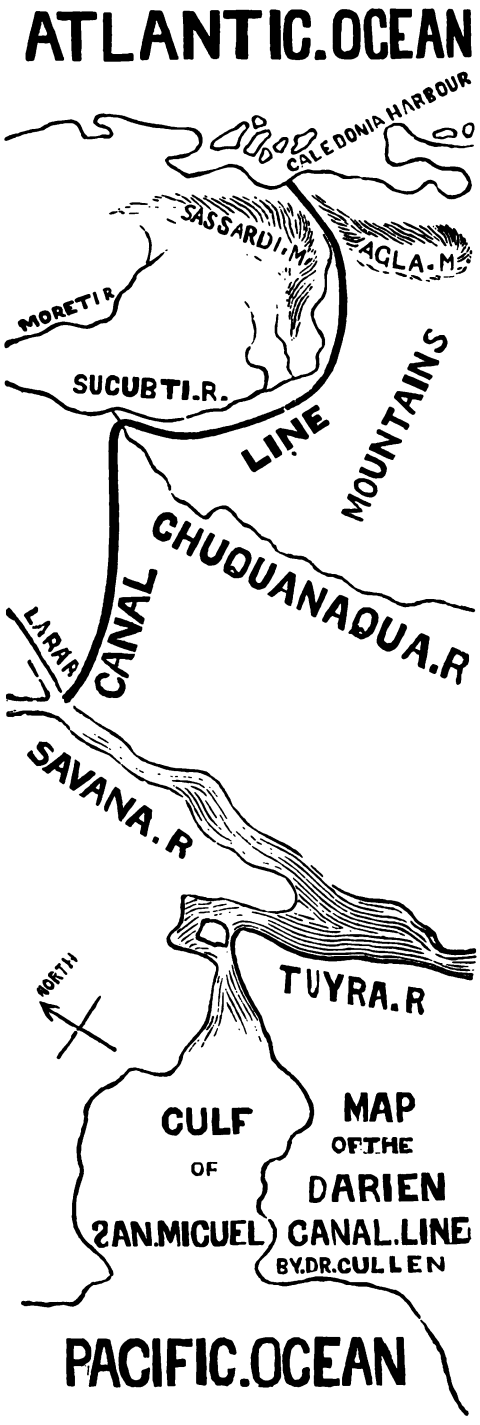
* "Letters on the Darien Ship Canal". London: Effingham Wilson. 1857.



THE CANAL LINE.

The country which the line traverses, like all the rest of Darien, is covered throughout with a dense forest, the continuity of which is broken only by the courses of the rivers. The whole tract, from sea to sea, for many miles on either side of the line, is totally uninhabited. The harbours at each terminus afford secure anchorage both in the dry and the rainy season, are safe and sheltered from all winds, have great depth of water and immense capacity, are easy of ingress and egress, and in every respect admirably adapted for the termini of a grand interoceanic navigation. Along the Atlantic coast, a continuous series of good anchorages extends twelve nautical miles in length, and from three-quarters to one mile in breadth. These are from north-west to south-east: 1. The channel of Sassardi, two miles and a-half long, the entrance of which is between Sassardi Point and one of the Sassardi islands. Into it falls the little river Sassardi, and at its mouth is the

Indian village of the same name, with sixty inhabitants in fifteen palm-thatched huts. 2. Caledonia harbour, three miles and a-half in length, the entrance of which is between Golden Island (Isla de Oro) and San Fulgencio Point; it is separated from the channel of Sassardi by a narrow bar of twelve feet; this could be easily removed, as the boring made in 1854 penetrated fifteen feet into marl. By cutting it through, the two harbours would be converted into one, which would have the advantage of two entrances. A considerable river, which rises in the valley between Sassardi and Agla mountains, falls into the harbour two miles and a-half north-west of San Fulgencio Point. 3. Caledonia Bay, an open roadstead with a beach, near the middle of which the Aglaseniqua and Aglatumati disembogue. 4. Port Escoces, three miles in extent inwards, and sheltered by a promontory. All the above anchorages, with the exception of Caledonia Bay, are completely sheltered, and the least depth of water in them is six fathoms. On the Pacific side, besides the great Gulf of San Miguel, which has an extent inwards of twenty-two miles, there is an inner harbour formed by the estuary of the Tuyra, which disembogues into the Gulf by two mouths, Boca Chica and Boca Grande, in each of which there is a depth of twelve fathoms at low water. Punta Brava, the north point of the Gulf, is seventy-eight miles south-east by east-half-east of Panama; and San Fulgencio Point, in Caledonia harbour is one hundred and thirty-five miles east by south of Aspinwall or Colōn, in Navy Bay, the Atlantic terminus of the Panama Railroad. The line first crosses a plain two miles in width, extending from Caledonia harbour to the entrance of a valley or pass, which runs in an oblique direction between Sassardi mountain on the north-west, and Agla mountain on the south-east. It then traverses the valley to its other extremity, where it strikes upon the Sucubti. The course of this river is next followed down to its mouth, which opens into the Chuquanaqua, a tributary of the Tuyra. Lastly, crossing the Chuquanaqua, the line traverses the forest to the junction of the Lara with the Savana. From that point there is an uninterrupted and easy navigation for the largest ships down to the confluence of the Savana with the estuary of the Tuyra. The whole length of the line is forty-two English miles, from which at least three may be deducted for the windings of the Sucubti, which may be cut across. As twenty-one miles and a-half are along the course of the Sucubti, and the lower twelve miles of it are pretty direct, they would admit of being canalised by means of dams and embankments for a moderate outlay. The entire line of transit from sea to sea will then consist of: canal, twenty-seven miles; canalised river, twelve; navigation of the

Savana, sixteen; and of the Tuyra, three; in all fifty-eight English miles.

This distance could easily be traversed within twenty-four hours, even making a liberal allowance for the time that would be occupied in the passage of several locks. The direct distance from Caledonia harbour to the Savana is thirty-two miles and a-half English miles, and the course is south 62° west (south-west by west-half-west) true, or south-west three-quarters west by compass, three-quarters to the right being allowed for the variation, which was 8° 50′ east in 1854. The variation in Darien is increasing at the rate, probably, of a-quarter of a minute every year, and may now be assumed to be 8° 53′ east. The distance from Caledonia harbour to the highest point on the Lara to which the tide reaches is less than twenty-eight miles, and a diminution of three miles in the length of the canal might be effected by commencing it a few miles above the mouth of that river, which would only require dredging to render it available. The Atlantic terminus of the line, in the bight north-west of San Fulgencio Point, is in latitude 8° 52′ 30″ north, and longitude 77° 42′ 45″ west. The mouth of the Lara is in latitude 8° 41′ 45″ north, and longitude 78° 7′ west.

No level has ever been taken on the line. I estimate the height of the dividing ridge between the river that falls into Caledonia harbour north-west of San Fulgencio Point and the Sucubti, the waters of which flow into the Pacific, at one hundred and eighty to two hundred feet; the bed of the Chuquanaqua, opposite Sucubti mouth, at seventy feet; and the water shed between the Chuquanaqua and the Savana at one hundred and twenty feet above the mean level of the oceans. There will thus be two summit levels, for each of which a most abundant supply of water will be afforded by the very numerous rivers in their vicinity. The most important elevation to be ascertained is that of the ridge in the valley, between Caledonia harbour and the Sucubti, which is the water-shed between the Atlantic and the Pacific, and is only four miles from the landing-place. The summit levels may admit of being cut down to such a depth, as to reduce considerably the amount of lockage that would otherwise be required.

According to the estimate drawn up by the Commission of Engineers of the Corps des Ponts et Chaussées, to whom the Emperor Napoleon referred the examination of the question, in 1857, the cost of a canal, with locks, by this line, would amount to about four millions and a-half sterling. The estimate drawn up in 1864 by M. Moguel Bey, the chief of the corps, amounted to about the same sum.*

* The estimate given by M. Garella and M. de Courtines, who made a

The material to be excavated consists of alluvial deposit of great depth, clay, gravel, and rock. The shores and the sides of the smaller hills are composed of an accumulation of coral deposit, forming, in some places, a loose kind of coraline limestone, but, in general, being disconnected. This structure is found to some distance inland, on removing the substratum of alluvial deposit, rendering it probable that the low land from the base of the hills has been formed by drift, or upheaval, in no very remote age. The soft material which was removed by Captain Hollins of the *Cyane*, in boring for a well near San Fulgencio Point, Caledonia Harbour, was dolomite, or magnesian limestone.

Some of the rivers are crossed high up by ledges of a slate, or coarse argillaceous schist, called *pizarra* in Spain, and known by the name of *killas* in Cornwall.

It was ascertained, in 1855, by Colonel Totten, who took a series of levels along the bed of the Panama railroad, that there is no difference in the mean level of the two oceans, both being on a level at midtide. In the rise of tide, however, there is a considerable difference, the greatest rise on the Pacific being 21·30 feet, and the least 7·94 feet; whilst, on the Atlantic, the rise varies from 0·63 to 1·60 feet. High spring tide of the Pacific is from 9·40 to 10·12 feet *above* high spring tide of the Atlantic, and low spring tide of the Pacific is from 6·55 to 9·40 feet *below* low spring tide of the Atlantic; thus there is a constant oscillation, the Pacific being, at high water, several feet higher, and at low water several feet lower than the Atlantic. The time of high water is nearly the same on both sides, namely, at 3 hours 20 minutes, at full and change.* Since the canal must have some locks, the difference in the rise of tide will have no effect.

The seasons are the dry and the rainy. The former, which corresponds with the season of the breezes or strong north-east trade winds, lasts from December to May; the latter commences in May, and continues till December, with fine

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detailed survey of the line from Navy Bay to Panama, in 1844, by order of Louis Philippe, for a canal forty-seven miles and a half long, including a tunnel three miles and five hundred and sixteen yards, at an elevation of 133 feet, amounted, at the rate of nine shillings per cubic yard for excavation, to one hundred and thirty millions of francs, or £5,200,000. See "Projêt d'un Canal á travers l'Isthme de Panama", par M. Napoléon Garella, Paris, 1845.

* This refers to Navy Bay and Panama. The rise and fall in Caledonia harbour is six inches neaps, and one foot six inches springs; and it is high water, at full and change, at 11 h. 40 m. The rise of tide in the Gulf of San Miguel is from eighteen to twenty-four feet.

weather at intervals. The prevailing wind on the coast of Darien is from north north-west to north-east. In the rainy season a land wind blows at night from the mountains, with occasional squalls with rain from the south-west. Hurricanes and earthquakes are unknown.

The reports of Dr. McDermott, of H.M.S. *Espiègle;* Dr. Brownlow, of the United States' corvette, *Cyane;* Dr. Rondat, of the French war steamer, *Chimere;* Dr. Ross, of H.M. steamer, *Virago;* Commander Parsons, of H.M.S. *Scorpion,* and Mr. Gisborne, show that, amongst 1,300 men who composed the crews of the vessels which lay at anchor in Caledonia Harbour and the river Savana, in 1854, not one single case of sickness of any kind occurred during the three months of their stay; whilst the convalescence of those who were sick on the arrival of the vessels there, was unusually rapid. The opinion which I had expressed in my book has thus been corroborated, and receives further confirmation from a document which I found in the course of my researches in the archives of Bogotá; I allude to the *Diary* of Sergeant Gabriel Morales who, with Sergeants Miguel Antonio Delgado and Miguel Quintana, commanded a detachment of 150 soldiers of La Princesa regiment, who had a short time before arrived from Spain, and were sent to search for Indians by Lieut.-Colonel Don Andres de Ariza, the Governor of Darien. They started from the Fort of Principe on the Savana, proceeded towards the Atlantic, and returned after an absence in the forest of fifteen days in the height of the rainy season, in July, 1786, in perfect health, but without having seen any trace of an Indian.

The only inhabited place on the line was the hamlet of Sucubti, population sixty, which was set fire to and abandoned by the people upon the approach of Lieutenant Strain, United States' Navy, in January, 1854. The inhabitants probably went to reside in Asnati. The only places within ten miles of the line are Sassardi, at the north-west end of the channel of Sassardi; Agla, about three miles up the Aglatumati, which falls into Caledonia Bay; Asnati, on a tributary of the Sucubti; and Moreti, on the river of the same name, which is about seven miles north of the Sucubti. The population of each is about sixty souls, the whole amounting to 300, inclusive of the former inhabitants of Sucubti.

The great difficulty in exploring the isthmus consists in the density of the forest, which renders it impossible to see more than a few yards a-head. The trees are of all sizes, from 30 to 150 feet in height, and have between them a multitude of tall shrubs and a close undergrowth of herbaceous plants. The trees support numerous trailing vines and creepers, known

vulgarly as *vehucos, lianas, nibbees* (in Demarara), and *bush-ropes* (in the West Indies). These ascend to their tops and fall in matted festoons, forming a perpendicular wall of foliage, which would delight the eye of the artist, but would totally impede the operations of the surveyor. Orchideæ and other parasitic plants, in great numbers and variety of form, cling to their trunks, encircling them with flowers of every hue.

Of palms, the most abundant are the troolies (*Manicaria saccifera*), itas or morichis (*Mauritia flexuosa*), and other fan palms, vernacularly known as guagaras, which occupy a large part of the space between the tall trees. Another palm very common is the corozo colorado, sillico or hone-palm (*Eläis melanococca*), which yields an oil identical with the palm oil of commerce. The principal timber trees are cedar (*Icica altissima*), mahogany (*Swietenia mahogani*), lignum vitæ (*Guaiacum officinale*), silk-cotton (*Bombax ceiba*), raft wood (*Ochroma lagopus*), espavé (*Anacardium rhinocarpus*), bamboo (*Bambusa arundinata*), bullet tree (*Mimusops sp.*), crab wood (*Carapa guianensis*), ebony (*Diospyros sp.*), hobo (*Spondias lutea*), iron wood (*Ybera puterana*), laurel (*Cordia gerascanthus*), locust or algarrobo (*Hymenœa courbaril*), mora (*Mora excelsa*), quiebra hacha or break-axe (*Hymenæa pentaphylla*), quira (*Platymiscium polystachyum*), tonquin-bean tree (*Coumourouma odorata*), and a very durable wood called yaya. The quipo tree, too, is very common; it grows to a height of 70 or 80 feet, perfectly straight, without any branches, except at the top; the bark is very thin, and the wood quite white, and extremely hard; it is, I believe, the caoba of Spanish, and the bastard mahogany of English woodcutters.

Monkeys, sloths, ant-eaters, dantas, machos del monte or tapirs, a small deer like the wirribocerra of Mexico, the sayno, havali cafuchi, warree or white-lipped peccari (*Dicotyles labiatus*), and the tatabro or collared peccari (*Dicotyles torquatus*), conejos or rabbits, and squirrels, are plentiful.

Amongst the birds are flamingoes, parrots, pigeons, humming-birds, and three kinds of wild turkey, viz., the guam, guan, pava de monte, or crested wild turkey (*Penelope cristata*); the powhi, or crested curassow (*Crax alector*); and the powhi de piedra, or galeated curassow (*Ourax pauxi*).

The Darien Indians are a handsome race, of low stature, slender and lithe of limb, and well adapted by nature for gliding with ease through the matted vegetation of the country. They have the copper-coloured skin; straight, coarse, black hair, and other characteristics of the Red Indians of South America, and, like them, are totally devoid of beard and moustaches. They live very peaceably together, are honest, cleanly, and

industrious, occupying themselves in fishing, striking turtle, hunting wild hogs,* deer, etc., and in cultivating plantains (*Musa paradisiaca*), yams (*Dioscorœa nyame*), cassava (*Janipha manihot*), cocoa (*Theobroma cacao*), and a little cotton. They have no cattle of any kind, nor even poultry, and they manifested a great aversion to some goats and kids I once brought with me, and refused to accept a present of them. Their food consists of plantains, cassava, yams, green turtle (*Chelone midas*), wild hogs, deer, wild turkeys,† fish, turtle, and iguana eggs; and, occasionally, of the manati or sea-cow, which frequents the coast and the rivers, particularly the Atrato. They also eat lagartos, a small species of alligator, the flesh of which, though of a musky taste, is tender. Turtle-meat, and also monkeys, barbecued or boucanned, that is, smoke-dried, are reckoned amongst the choicest dainties of the table. A rich, yellow soup is prepared from the scarlet nuts of the corozo colorado (*Eläis melanococca*), which they boil till the stringy pulp falls away from the seeds, when they squeeze it and throw away the fibre; this oily soup is sometimes thickened by the addition of mashed ripe plantains. The corozo yields by expression an oil precisely similar to the palm oil of commerce, which is the produce of *Eläis Guineensis*, an African palm of the same genus.

They are very expert at throwing the lance and harpoon, and striking turtle, fish, and manati. With their barbed palm-wood arrows they are able to transfix large fish at a distance of two or three feet beneath the surface. They spear turtle at sea with a heavy palm-wood staff, with a notched iron peg at the end, to which twenty fathoms of strong silk grass‡ line are attached. Sometimes they catch them at night as they crawl upon the beach to lay, when they have only to turn them over on their backs to make sure of them.

They make cotton and grass hammocks, canoes of callicalli, a red wood like cedar; and baskets and cups, and a sort of flute called fattora, of bamboo. The seeds of the candle-tree (*Aleurites triloba*), strung on reeds or slips of cane, serve them for candles. These nuts resemble chesnuts, and

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* There are two species, the Tatabro, or collared peccari (*Dicotyles torquatus*), and the Warree, Sayno, or white-lipped peccari (*Dicotyles labiatus*).

† There are three kinds of wild turkey common in the forests of Darien, viz., the Pava de monte, quan, or quam (*Penelope cristata*); the Powhi, or crested curassow (*Crax alector*); and the Powhi de piedra, or galeated curassow (*Ourax pauxi*).

‡ A species of Bromelia. Another kind of silk-grass, the fibre of which resembles Manilla grass, is yielded by Fourcroya, a plant of the family Amaryllidaceæ, sub-order Agaveæ.

are very oily; one of them will burn for four or five minutes, giving a light equal to two or three candles. The flower of the tree has a very fragrant smell. The seeds of *Fevillea scandens* and *Fevillea cordifolia* or *Nhandiroba*, called cocoons in Jamaica, answer the same purpose. The berry of the jaboncillo (*Sapindus saponaria*) is used by them instead of soap. Occasionally they have a feast, at which they are painted red with arnotto (*Bixa orellana*), and drink much chicha, a liquor resembling the pyworri of the Guiana Indians, but made from Indian corn. They also make a drink of fermented pine-apple juice, and another, called misla, of sweet plantains mashed up with water. Dry misla is a cake made of the highly-nutritious meal of plantains dried in the sun, which is called congo tay by the Negroes of Demerara, who prepare their foo-foo from it. After drinking and dancing to the sound of the fattora and the maraka or shak-shak, a calabash half filled with the seeds of *Canna achiras*,* or Indian shot, they all rush into the water to swim. A chicha feast lasts two or three days, and is just the same sort of entertainment as the pyworri feast of the Warrows and Caribbees.

They are accustomed to the use of fire-arms and are good marksmen, but their usual weapons are spears and arrows; they use the woorali, urari, or curare poison, the basis of which is an inspissated extract of the barks of *Strychnos toxifera* and *Strychnos cogens*, two of that class of twining vines or creepers, known by the names of lianas, vehucos, nibbees, and bushropes. The latter bears a very close resemblance to the *Mavacure* of the Orinoco, which is identical with the *Lasiostoma curare* of Venezuela, and the *Rouhamon Guianensis*, which Aublet found on the banks of the Sinamari, in Cayenne.

The blowpipe or sarbacan is a single tube, called borokeyra, made of the stem of a young palm of the genus *Iriartea*.† The arrows are ten inches long, extremely slender, scraped to a fine point at one end, and cut like a corkscrew for an inch up, showing a very fine thread that forms a spiral screw; this is rolled in the woorali, which is allowed to dry on it. They are remarkable for their hardness, weight, and elasticity, and are made of the leaf-ribs of the cucurite palm (*Maximiliana regia*). To obviate windage, a dossil of cotton, or of silk-

* The rhizomes or root-stalks of Canna achiras and C. coccinea, of the family Marantaceæ, which are cultivated at St. Kitt's, yield the arrow-root or starch called Tous les Mois.

† In the pucuna or zarabatana of the Guiana Indians there is an inner tube, which consists of a single internode of a gigantic reed, Arundinaria Schomburghii.

cotton from the *Bombax ceiba,* is wound round the butt. Aim being taken, the dart is projected by a sudden forcible expiration, and will carry 100 yards. It is certain death to any animal wounded. The arrows are kept in a bamboo quiver covered with a piece of the hide of a tapir or peccari.

A jaguar, when hit with a poisoned arrow, runs ten or twelve yards, staggers, vomits, and dies in four or five minutes. A bird is killed as by a bullet. It was found, by experiments made by the Pharmaceutical Society of Paris, that, though an animal, when wounded, falls down apparently dead, it is at first only in a state of coma, and may be recovered by artificial respiration and the exhibition of ammonia; indeed, Waterton cured an ass by inflating its lungs with a pair of bellows, but it remained for a year afterwards in a very delicate state of health.

Although there are two species of *Strychnos* common in Darien and Panama, they say they do not themselves prepare woorali, which they call *iná* and *corová,* but get it from the Chocoanos. The Indians of Chocó and Barbacoas use also the *Veneno de rana,* or frog poison, which is obtained by placing a species of yellow frog, that frequents the swamps there, over hot ashes, and scraping off the viscid humour that transpires. After thus torturing the frogs, they let them go that they may serve another time. *Veneno de culebra,* or snake poison, is also said to be used in Chocó.

They are by no means demonstrative, being very quiet, silent, and apparently apathetic; offering, in this respect, a marked contrast to the noisy, vivacious Negroes: but they are acute observers, and possess the imitative faculty in a high degree. Their indolence and occasional activity form a surprising contrast. Nothing will induce them to work steadily for any length of time, and they devote whole days together to swinging in their hammocks; yet they will pursue the chace through tangled, thorny, trackless forests, and across rapid rivers, with untiring energy. They will not clear the brushwood from about their houses; yet they will make a tedious voyage of 100 miles or more in a small canoe, to sell a couple of turtle worth two dollars, or to buy some article of trifling value. Nor is their fear of death in some shapes, and their fearless defiance of it in others, less paradoxical. They dread sickness like any old woman, but will boldly face a jaguar in the woods, go through the wildest surf, or over the most dangerous rapids, or swim in waters full of sharks and alligators. They are grossly superstitious, and at the same time quite deficient in veneration. If well treated, they would be trustworthy and faithful, but I believe they would have no

scruple in killing any one who might use them harshly, or wound their susceptibilities.

They place great faith in the divining powers of their leles, or priests, who advise them in all important matters, and pretend to foretell events. Like the Pieiimans of Guinea, and the Sookias of the Mosquito territory, those sorcerers, before delivering their oracles, utter a series of prolonged howlings, mutter incantations, and invoke all sorts of whang-doodlums, and other fabulous animals with terrible names. This ceremony is called a pow-wow. They used, like the Caribs, to worship the devil, who is called in both languages, Tuyra, which, it may be observed, is the name of the principal river of Darien. It is worthy of note that the Caribs and Arrowaaks also had their magicians, called boyez, who were supposed to exercise an influence over the maboyas, or evil divinities. The candidate for admission into this caste was compelled to undergo severe penance by rigorous fasts, scourgings, suffocating fumigations, and horrid lacerations of his body. By these means a familiar spirit, or demon, was placed at his command, and he took his rank as a prophet and soothsayer.

The Darien Indians avail themselves of every opportunity of being baptised, and several of them have been christened by the Jefe Politico of Portobello. The Jesuits had several doctrinas or missions among them at the beginning of the last century, but they were abandoned in 1719, when the Indians rose up and killed all the Spaniards who were then settled in their territory, in revenge for some cruelties perpetrated on them. In 1740, peace having been made with them by Lieut.-General Don Dionysio Martinez de la Vega, Sebastian de Eslaba the Viceroy of Santa Fé sent to North Darien the Jesuits Salvador Grande and Pedro Fabro, whilst the President of Panama sent to South Darien Fathers Matias Alvarez and Claudio Escobar, who formed the settlements of Molineca, Balsas, Tucuti, Chuquanaqua, Cupe, and Yavisa. But they had scarcely succeeded in establishing those missions, when the Indians deserted them, the padres having escaped with their lives owing to the timely warning given to them by an old woman. The above settlements were afterwards occupied by Spanish Negroes, the Indians having totally abandoned the south of Darien, and retired to the Atlantic coast. Since 1740 no attempt has been made to convert or civilise these people. About twenty-five years ago, three missionaries from Jamaica came to the coast, but the Indians would not let them land.

They have a great dread of the small-pox, which is one of their reasons for not allowing foreigners to enter their terri-

tory; the principal one, however, is their natural desire for independence, and the idea that God made the country for them alone.

It is not unusual to meet albinos among them. At Perdon Island, in San Blas Bay, I saw three children by the same parents, two of whom were albinos. They had white hair and eyelashes, and the milky whiteness of skin, which is owing to the absence of the rete mucosum, the layer between the cuticle and cutis vera, that secretes the colouring matter on which the complexion depends. A moment's exposure to the sun was sufficient to redden their skins, and smart them so much as to oblige them to run back into the hut. Like all albinos they were nyctalopes, and could see pretty well in the moonlight and after dark, but their sight was very weak in daylight, owing to the absence of the uvea, which secretes the pigment of the iris.

These Indians are excellent boatmen and expert sailors. Several of them have made voyages to Jamaica, and even to the United States; and one, named Robinson, resided for twelve years in Washington, where he was educated at the expense of the late Daniel Webster, in whose house he made the acquaintance of the leading statesmen of America. He returned to Darien in 1853, and was sent to confer with the commanders of the expedition of 1854 by Calohgwa, the centenarian chief, whose secretary he represented himself to be. He afterwards accompanied Mr. Gisborne across, from Caledonia Harbour to the Savana river and the gulf of San Miguel, in order to secure the peaceful behaviour of the Sucubti people* towards him. He spoke English fluently, could read and write well, had a great taste for music, and was a perfect gentleman in his manners. He said he was thirty years of age, and resided at Carti.

They are very fond of adopting English or Spanish names, and several of them asked me to give them mine. Most of the traders, indeed, have names given to them by the masters of English or Granadian vessels which have traded on the coast. Thus, in a voyage which I made all along the coast in a canoe, and in the course of which I called in at all the settlements, I found at Mandinga, John Bull; at Yantopoo, Camp-

* Sucubti hamlet, containing a population of fifty souls, was the only inhabited place on the canal line. It was set fire to and abandoned by the people upon the approach of Lieut. Strain, U.S.N., about three weeks before Mr. Gisborne's arrival there. It has, probably, not been reoccupied since, as, in former times, whenever an armed party of Spaniards visited a place, the Indians used to abandon it for ever.

bell; at Carti, Vicuña, William and Tom Dadd; at Rio Diablo, Story and Jack Bragg; at Azucar, Crosby; at Playon Grande, William Shephard and Tom Taylor; at Putrigandi, Julian or William, a very intelligent man; at Sassardi, John Bull and Denis; at Aglatumati, Robinson; at Agla, Juan Sevá; at Carreto,* Smith, Bolivar and Trueno (thunder); at Tarena, Zapata (Shephard), etc., etc. On the other hand, they have a great objection to tell their own names, fearing, perhaps, that their strange sound might expose them to ridicule, to which they are very sensitive: thus, when a man is asked, "Iki peynooka" (What's your name?) he invariably replies, "Nooka chuli" (I have no name), meaning, thereby, no English or Spanish name.

The language, like those of other American tribes, belongs to the polysynthetic class, which is characterised by the multiplicity and complexity of the forms assumed by the verbs; these are made up by some intercalation or suffix, often concealed by euphonic changes, indicating the object of the verb, which thus prefigures what the speaker refers to, whether it be singular or plural, animate or inanimate, masculine or feminine, etc. The different words of a clause are sometimes incorporated so as to form one word, and this is done by intercalating as well as by affixing syllables, which appeared to be the roots of the component words. It is extremely euphonious, as will appear from the following examples:—

English.	*Darien.*
How do you do?	Pey noogweti gwa? (you well are?)
The tide is rising.	Timureti nacqualomai.
The tide is falling.	Timureti arreogali.
When will the canoe come from down the river?	Ulochana ulnonigi diba tee yalakari?
When are you going to hunt deer?	Peeyanai cheena cohgwey poorkweesa?
My brother is in the bush hunting.	Angmechati wirchanati.
To cut a path through the forest.	Ikalsmeynai chapoorwolli.

The following comparison of a few simple words will show how distinct it is from the language of the neighbouring Indians of Chocó.

English.	*Darien.*	*Chocó.*
Water	tee	payto
Fire	cho	tuboor
Sun	ipey	pesea
Moon	nee	hedecho
Man	mastola	mochina
Woman	pundola	wuena

* The chief of this place gave his daughter to Vasco Nuñez de Balboa for a wife.

English.	*Darien.*	*Chocó.*
Jaguar	achuiyeti	imama
Wild turkey	chigli	zamo
Snake	nagupey	tama

Their form of government is purely patriarchal, the oldest and most experienced man in each settlement being accounted chief by general consent, and universally looked up to and obeyed as such. The last chief of the whole tribe was Calohgwa of Carti, in San Blas Bay, who died in 1856, at the age of 102. Instances of great longevity are common amongst them, and I met four men, named John Bull, Vicuña, Campbell, and Shephard, who recollected the signing of the treaty of peace with the Spaniards on Ascension Island, in Caledonia Harbour, on the 9th of June, 1787. This treaty was signed, on the part of the Indians, by the Cacique General, Don Bernardo of Etata, Captains William Hall of Putrigandi, Guaicali of River Monos, Jorge of Aglaseniqua, Urruchurchu of Sucubti, Jack of Gandi, and Henry Hooper; and on the part of the Spaniards, by General Don Antonio de Arebalo, and Joseph de Guerra and Vaos. The witnesses to the signatures of the Indians were Antonio Espitalete, Geronimo de Segovia, Manuel de Echandia, De Pin Duvernay, and Eusebio de Escalante. Another treaty, by which the Indians engaged to permit Spaniards to trade with them, and to hold no further communication with English traders, was signed at Turbaco by the Viceroy and Archbishop of Santa Fé, Don Antonio Caballero y Gongora, and thirteen Spanish officers, and by the Cacique General and five other Indian chiefs, on the 20th of July, and was ratified at Carthagena, on the 4th of December, 1787. The principal object of the Spaniards was to open a road from Carolina Fort in Caledonia Bay, between Caledonia Harbour and Port Escoces, to the fort of Principe on the Savana, both of which were built in 1785. But the Indians having offered a determined opposition to the project, they were abandoned in 1790, only one Spaniard, the adjutant, Don Manuel de Milla, having succeeded in crossing from one to the other during their occupation. From documents which I found in the archives of Bogotá, in 1852, it appears that Caledonia Bay was the place whence Vasco Nuñez started on the memorable journey which resulted in the discovery of the Pacific—where the town of Agla was soon afterwards built—where the buccaneers landed in 1680, when they crossed, *viâ* the Sucubti and the Chuquanaqua, to plunder Santa Maria; and where the Scotch colony*

* The precise site of the town of New Edinburgh, and the fort of St. Andrew, was on the inner side of the promontory between Caledonia Bay

was settled by Patterson, who was guided in his selection of that locality by the account which Lionel Wafer, the *ci-devant* surgeon of the buccaneers, had given him of its natural advantages, and of the facility of crossing from thence to the Pacific.

They carry on a considerable trade with foreigners in cocoa-nuts, cocoa-nut oil and fibre, cocoa, cotton hammocks, grass hammocks, and canoes of calli-calli, a red wood like cedar, which withstands the attacks of all insects, and bears wear and tear better than mahogany. They also dispose of large quantities of carey, caret, or tortoiseshell,* and tagua, antá, or vegetable ivory, which is the hard albuminous kernel of *Phytelephas macrocarpa,* a dicœcious stemless palm. All those articles are bartered for coloured calicoes, shirts, calico trousers, looking-glasses, knives, machetes or cutlasses for cutting bush, hatchets, culinary utensils, beads, guns, powder and shot, tobacco, rum and brandy. They will take no money in exchange for any of their commodities, neither will they sell gold dust, it being strictly forbidden by their law to bring down any to the coast.

A very profitable trade might also be carried on with them in India-rubber, fustic and other dye-woods, various gums and resins, and a fine grass which they use instead of hemp and flax, and of which they make most durable and beautiful hammocks, called chinchoros, and redes, or nets, by the Spaniards.

Some schooners and sloops from Carthagena, Curaçoa, Jamaica, and Portobello, and the *Abingdon* and other clippers from Baltimore, carry on the trade. The principal traders (exclusive of Americans) are the brothers Abraham, of Kingston and Portobello; Captains Ramon Iglesias, Faustino, and Zephyrino, of Carthagena; Richard Ellis, or Illhes, of Curaçoa; and Richard Marks, master of the *Flor de Maio,* of Carthagena. Juan Sevá, a native of Malaga, who traded with them from

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and Port Escoses. The fort mounted fifty guns, and had a garrison of six hundred men. I brought Dr. McDermott, of H.M.S. *Espiegle,* to search for the canal which the colonists dug round the fort, but it was dark when we reached the place. He returned afterwards with Commander Parsons, and they found the canal quite perfect. It was 130 paces in length, cut angularly as a fortification, with an embankment on the inner side. Its north entry, 8 feet deep and 12 feet wide, was cut through rock. The summit of the promontory is 580 feet, and the hill at its point is 260 feet high. It was from the latter, which Parsons named Patterson Hill, that the colonists were accustomed to look over the sea in the direction of Scotland.

* The hawksbill turtle (*Chelone imbricata*) is the one most in request for its carapace, or dorsal buckler, the horny plates of which are known as tortoise-shell.

Carthagena for twenty-eight years, and never once set his foot on shore, died in 1853. About the same time died Capt. John Shephard, of San Juan de Nicaragua, about one hundred years of age. He used to trade on the Darien coast, at the end of the last and beginning of the present century, in his schooner, the *Mandeville,* and was regarded as a smuggler by the Spaniards, who took and put to death his partner. A half-Indian son of his resides at the mouth of the Tarena, a river a little west of the Tarena mouth of the Atrato. He is called Zapata, which is a mispronunciation of Shephard. Another trader, in former days, was Captain Latham, who was highly esteemed by the old Indians, and whose widow lately resided at Carthagena.

Altogether, the Darien Indians appear to be in a more advanced state of civilisation than their neighbours, the Veraguas Indians, on the west, or the Goahiros, on the east. The latter inhabit the Goahiro territory, inland of Rio de la Hacha, and allow no stranger to enter their country. A fort on the summit of La Teta (the pap), a high mountain a few miles inland, is the residence of their cacique. They breed horses, on which they ride with amazing fleetness. They often visit Rio de la Hacha, and are sometimes to be seen at Carthagena.

The Darien women wear gold nose-rings so large that they hang down below their mouths, and must be raised up or taken out when they eat. They are diamond-shaped, cut at one of the angles to admit of their being put in and taken out, and weigh about a quarter of an ounce, being very thick, and of gold twenty-two carats fine. They consequently drag down the septum of the nose considerably. Glass beads, strings of coral, gold trinkets, tigers', sharks', and alligators' teeth, pieces of money, and a variety of miscellaneous articles, are used as ornaments round their necks, wrists, ankles, knees, and hips. Almost anything that can be strung round their necks will do for a necklace, and the gilt buttons which I cut off my Armenian jackets answered the purpose admirably. They have a fashion of binding their legs and thighs in three or four places with strips of cloth, or withes of liana, so tightly that the flesh is swelled out between the ligatures. On grand occasions they put on a dress of coloured calico, and the men wear shirts and trousers, but generally both sexes content themselves with a simple lap of cotton round the loins, called panequiri. This is of the same scanty dimensions as the ayuca, or ku, of the Guiana women, which is a piece of the fibrous sheath of the leaf-stalk of a palm tied before and behind to a string round the waist. They spin cotton thread with a spindle, and make very elegant and durable hammocks both of cotton

and grass. They also profitably employ part of their time in preparing tortoise-shell, gathering the fruit of the cocoa tree and extracting the seeds, making cocoa-nut oil, grating and washing cassava roots, and baking the farina to make cassava bread, etc.; so that they may fairly be considered to be very industrious, independently of their culinary labours, mention of which should not be pretermitted, since their skill in concocting most savoury *sancoches* and stews can hardly be surpassed.

After I had, owing to my knowledge of Indian character acquired in other parts of South America, safely passed the ordeal to which my trespassing on their territory subjected me, I was invariably treated by this tribe with the greatest kindness and hospitality, although the old men were strongly opposed to my project for cutting a canal across their country, even after I had explained that the only inhabited place on the line was Sucubti hamlet, whose population (fifty souls) would not be disturbed; and offered to procure them a grant from the New Granada government of a tract in any part of the south of Darien twenty times the extent of the canal line. I therefore feel myself bound earnestly to urge the justice of dealing with this fine race in all future transactions in a spirit of conciliation and friendship, and with the strictest integrity and honour.

In 1747, Don Joaquin Valcarcel de Miranda, governor of Darien, estimated the Indian population at 5000 families. I do not believe it amounts, at present, to 3000 souls. The following is my estimate of the population:—

Mandinga, Carti or Cedar River, Carti Chico, Rio Diablo or Devil River, Rio Azucar or Sugar River, Concepcion, Playon Grande, Playon Chico, Rio Monos or Monkey River, Pitgandi, Ciuti, Putrigandi, Navagandi, Sassardi, and Agla; Carreto, Gandi, Tripogandi, Tutumati, Tarena, and Arquia, a few miles inland of it. Twenty-one villages on the coast say 100 souls in each - - - - - - - - - -	2,100
Chepo, Uslucapanti, Moreti, Asnati, Sucubti, Chueti, Jubuganti, Tuquesa, Tupisa, Ucurganti, Pucro, and Paya. Twelve villages inland, say 60 souls in each - - - - - -	720
	2,820

The Granadian population in the south only amounts to 1485, who are nearly all Negroes. Thus, strange to say, less than 4500 people, most of them savages, occupy a country about 200 miles long, with an average breadth of sixty miles, having a soil of amazing fertility, capable of yielding the most valuable products, and occupying a most commanding position for commerce, situated, as it is, between the Atlantic and Pacific, with magnificent harbours on each, and at only eight

days' steaming from New York and seventeen from England. It seems still more strange when we reflect that the narrowest part of the neck of land between the two oceans is there; and that there, also, the first settlement was made after the discovery of America—Santa Maria la Antigua del Darien, near the mouth of the Atrato,* having been the first town built on the continent of America. Nevertheless, there is yet neither path, track, trail, nor line of transit of any kind across the Isthmus of Darien.

VOCABULARY

OF WORDS IN THE LANGUAGE OF THE TOOLĒ OR DARIEN INDIANS.

Water, *tee*
Fire, *cho*
Sun, *ipe*
Moon, *nee*
Stars, *eeeeskwa*
Thunder, *marra*
Sky, *nibtala*
Sea, *termala*
Sea shore, *termankaka*
River, *teeguala*
Rivulet, *teeana*
Rain, *teeguiyeti*
Day, *obigine*
Night, *mutikuti*
Morning, *pani*
Evening, *chetōgi*
Dry season, *yola*
Rainy season, *tee gini*
Earth, *naba*
Mountain, *chapurmala*
Valley, *negnepa*
Island, *tooboo*
Forest, *chapur*
Stone—rock, *akkwa*
Path, *nappananne*
Flint, *akkwanucha*
Steel, *chekar*
Trees, *chowala*
Leaves, *chowalka*
Leaves to thatch huts, *uruaga*
Maize, *opa*
Plantain, *machee*
Cocoa-nut, *okoba*
Rice, *caganturpa*
Cocoa, *chiaqua*
Biscuit, *meriki mato*
Canoe, *ultumati*
Paddle, *cammi*
Pole for canoe, *otigali-ul-chōgwala* and *negloneka*
Cutlass, *echa*
Calabash, *noka*
Kettle, *eysmeti*
Cannon, *kinkili tumati*
Gun, *kinki*
Shot, *kinkwaka*
Clothes, *mola*
Trunk, *uloōgwa*
Looking-glass, *ispe* (from the Spanish *espejo*)
Shirt, *mola makalete*
Beads, *kingwagwa*
Nose rings, *achu kinēti*
Meat, *chana*
Wood, *chōō*
Salt, *palu*
Tobacco, *gua-ala*
Knife, *eystina*
Axe, *akana*
Bow, *kinki*
Arrow, *cheekwa*
Woorali poison, *inā* and *corovā*
Chingo (small canoe), *ultotoqua*
House, *neka*
Tiger, *achuieti*
Large tiger, *achukiniti*
Cayman, *thayma*
Snake, *nagupe*
Wild hog, *yanu chapurri*
Turtle, *patti* and *moroko*
Deer, *cogue*
Iguana, *arri*
Dog, *achu*
Bird, *chikwi*
Eggs, *chikwiala*
Wild turkey, *chigli*

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* It was probably at the mouth of the Tarena, a small river which falls into the Gulf of Darien, a short distance to the west of the Tarena mouth of the Atrato.

Parrot, *quackwa*
Toucan, *guelle-guelle*
Guacharaca (a sort of pheasant), *charcaca*
Fish, *huguaw*
Mosquito, *kwee*
Priest and divine, *lele*
Spaniard, *Guaka*
Rum (also poison), *inatitiliti*
Man, *mastola*
Woman, *pundola*
Boy, *machigua*
Girl, *punagua*
Child, *machi totoqua*
Big man, *mastomati*
Little man, *mastoltoqua*
Chief, *chogualipeti*
Chief's daughter, *chogualipeti echisqua*
Friend, *aya*
White woman, *pundola chipugwa*
Black woman, *pundola chichiti*
White man, *guag chipugwa*
Black man, *mastol chichiti*
My husband, *an-chugui*
My wife, *am-pundola*
My son, *an-uchu*
My daughter, *am-punagua*
My brother, *ang-mechati*
My sister, *an-uika*
Heart, *quakki*
Blood, *ape*
Head, *ochana*
Foot, *naca*
Feet, *nacamala*
Face, *gwawkala*
Hair, *chagli*
Ear, uwa
Eye, ibia
Nose, *an uchuu*
Mouth, *kagya*
Tongue, *kwawpina*
Teeth, *nukala*
Beard, *chica*
Neck, *tukala*
Arms, *ankala*
Hands, *anchunkala*
Fingers, *cōō*
Nails, *cōō nu*
Leg, *thugwa*
Body, *anabgana*
Name, *nookka*
What's your name? *iki pe nookka*
Your hand, *peyanchola*
Your hands, *peyankalmala*
1 *quenchaqua*
2 *pocoa*
3 *pagwa*
4 *pakegua*
5 *aptali*
6 *nerkwa*
7 *kugli*
8 *pabagi*
9 *pakebagn*
10 *ambe*
11 *ombegwargine kaka quenchaqua*
12 *ambe kaka pocoa*
13 *ambe kaka pagwa*
20 *toolaguena*
21 *toolaguena kaka quenchaqua*
30 *toolaguena kaka ambegi*
40 *toola pogwa*
100 *toola tale*
Money, *mania*
Much money, *mani toga*
How many reals? *iki mani*
One real, *maniguena*
Two reals, *manipogwa*
Five reals, *maniaptali*
A dollar, *tumguena*
Two dollars, *tumpogwa*
Seven dollars, *tungkukuli*
Eight dollars, *tumpakeguaka*
Will you buy? *pepague*
What do you wish to buy? *ipiani ampenuke*
I, *ani*
Thou, *pēē*
He, *aa*
We, *nanmala*
Ye, *pemala*
They, *amala*
This, *iktique*
That, *ugue*
All, *pelo*
Much, *yēē*
Who is there? *tōgwachi*
Near, *iptigins*
To-day, *imi-ipe*
Yesterday, *chae*
Ere yesterday, *astogi*
To-morrow, *pani*
The day after to-morrow, *alchuli*
Yes, *ēē*
No, *chuli*
Good, *nugweti*
Bad, *istalga*
Large, *tumati*
Small, *totogwa*
Much, *ichogi*
Little, *icheguaw*
Alive, *toola*
Dead, *purkweesa*
Hot, *ugueti*
Cold, *tampe*
Old, *cheleti*
Young, *nuchookwa*
Handsome, *itanlegi*
Ugly, *yagitaglegi*
To eat, *maskune*
To drink, *cope*
To drink water, *tee cope*
To drink liquor, *chicha cope*

To sleep, *kapenäi*
To speak, *chumake*
To dance, *quile*
To see, *petake*
To sit down, *pechique*
To come, *nene*
To go, *nae*
To sow, *epige*
Wait a while, *anapta quelli*
Give me fire, *so pincha* and *angacho cheeyalo*
It is late, *pato chetŏgi*
How do you do? *pe nuguĕtigwa*
How are your sons? *pe nuchugana nugueti*
How is your son? *pe machi nugueti*
Where didst thou come from? *peeya akari petanigi*
Where did ye come from? *peeya akari petanimala*
Where did your friends come from? *pey ayamala peeya kartanigi*
When will you come? *kana petakowe*
Come soon, *quarrye petakowe*
Whence come ye? *peeyal petanigi namala*
Where are you going? *peeyal penai*
Let us go bathe, *omämäla*
When will you come? *iki pia* and *aniki*
When will you go? *iki pianai, chana penai*, or *ipa pigwanai*
I will go to-morrow morning, *pane nai*
I will go at noon, *tata yorke nai*
At noon, *ipi yolapoogwe*
At what time shall we go? *chana nang malowe*
At midnight, *cabguena*
We will go before midnight, *yo cabguen gutagwe namalogwe*
We will go before noon, *ipe yolookoogwe namalogwe*
We will go after midday, *ipe agupinitile namalogwe*
When is your brother going? *ipe quenati chana pe nai*
He will come in the evening, *cheto takogwe*
He will come to-morrow, *wakoor takogwe*
Have you a father? *papa mai*
Have you a mother? *nanna nai*
Do you know? *pe wishi*
Will you come with me? *pe taniki yo*
Come with me, *ambag nene*
What do you think? *iki pinchachu mai*
Two canoes, *ultumati walbogwa*
Wind, *proa* or *puruaga*
East wind, *ti puruaga*
West or vendaval, *chagri puruaga*
North wind, *makati puruaga*
South wind, *yala puruaga*
Fair wind, *proa nugueti*
Foul wind, *proa isterga*
There is very little wind, *proa pipigwa*
There is very much wind, *proa toga*
What wind is blowing? *iki proa pole*
Mast, *choarra*
Sloop, *ulo choarra quenchaqua*
Schooner, *ulo choarra pocoa*
Brig, *ulo tumati choarra datali*
Ship, *ulo choarra pagua*
Steamer, *so ulo*
Rough sea, *teemala uruetoga*
There are rocks in the sea, *teemala akkwa mai*
Loose the sail, *wurmola parmite*
Take in the sail, *wurmola he*
Belay the rope, *tupa eytine*
A broken plank, *urkwa marali*
The tide is rising, *timureti nacqualomai*
The tide is falling, *timureti arreogali*
Yesterday a vessel sailed from hence, *psai ulotumati itikine nati*
Yesterday a vessel arrived here, *psai itikine ulo nonni*
A vessel will arrive here to-day, *eysmiqua ulo nonni*
To-morrow a vessel ought to come in, *pani ulo itikine nonni*
Ten days ago a vessel came here, *ipambegi woosa ulo itikine nonni*
Two Americans went on shore, *Meriki pogwa itikine nappa nannie*
They went into the bush, *yala nannie*
They went up the river, *tiguala nannie*
The river is deep, *tee yegual googwe*
The river is shallow, *tee thathala*
The river source, *tee tokoo*
There are rocks in the river, *ti ginge akkwa*
There will be much rain to-night, *iptigue dadogue imimutiki witoguontigue anthake*
The chingo is ready, *koowal ulnai*
Two canoes have arrived, *wala pokwa ulnonnigi*
A chingo has arrived, *ulgwen nonnigi*
A canoe has arrived, *walguen ulnonnigi*
When will the canoe come from up the river? *ingoo ulak tee yoguey nak walakari*
When will the canoe come from down the river? *ulo chana ulnonñigi diba tee yalakari*
When are you going to hunt deer? *peeyanai cheena cŏgwe purkweesa*
My brother is in the bush hunting, *angmechati wirchanati*, or *chapoor wagnati*
To cut a path through the bush, *ikalsmeynai chapoorwali*

The following short vocabularies of the Chocó, Mosquito, and Caribisce languages, will serve to show the great difference that exists between the languages of different tribes. The Indians of Chocó are the nearest neighbours to those of Darien. The Noanamá Indians, in the south of Chocó, have a distinct language of their own.

CHOCÓ.

Water, *payto*
Fire, *tuboor*
Sun, *pesea*
Moon, *hedecho*
Tree, *pachru*
Leaves, *chituha*
Thunder, *pa* (Arrowaak, *bellibellero*)
House, *dhe*
Canoe, *habodrooma*
River, *tho*
Man, *mochina*
Woman, *wuena*
Child, *wordoche*
Large man, *mochina deasira*
Little man, *mochina zache*
River Tuyra, *Toguroona*
Tiger, *imama*
Lion (puma), *imama pooroo*
Iguana, *ipoga*
Lizard, *horhe*
Snake, *tama*
Wild turkey, *zamo*
Parrot, *carre*
Guacharaca, *bullee bullee*
Macaw, *pavora*
The tide is rising, *tobiruoor*
The tide is falling, *eribudo*
Where are you going? *amonya*
Where do you come from? *zamabima zebuloo*
Let us go, *wonda*
Let us go bathe, *wonda cuidee*

MOSQUITO.

Man, *waikna*
Woman, *mairen*
Bay, *tukta*
Girl, *kiki*
Water, *lia*
Fire, *panta*
Priest and diviner, *sookia*
Man (Maypure, *cafaqurichiui;* Ottomac, *andera;* Muysca, *muysca;* Californ. *apache*)
Woman May. *tinsoki;* Ott. *ondua*

CARIBISCE.

Water, *toona* (Arrowak, *wunney;* Accaway, *yabbo;* Warrow, *ho*)
Fire, *wottho* (Warrow, *acuna*)
Sun, *weyu* (Arrowaak, *hadhali*)
Moon, *noono* (Arrowaak, *cawchi;* Warrow, *wainik*)
Tree, *dhang* (Warrow, *we-we*)
Noon, *curitani*
Mosquitos, *mabiri*
Bird, *donora*
Man, *wookoori* (Quichua, of Peru, *ceari-war-neebooroo;* Arrow. *luhkoo* and *wadeely;* Accaway, *weenow*)
Woman, *wahri* (Quichua, *huarmi;* Arrow. *hearoo;* Accaway, *ebooety;* Warrow, *teeda*)
Boy, *membo*
Girl, *amuyachoo*
A big man, *obothöni*
A big woman, *obotho wahri*
A little house, *membo haoutho*
White man, *branaghoori*
Black man, *mēkōro*
I, *aou*
He, *ero*
She, *mōsē*
The water is rising, *ithoomäi*
The water is falling, *nabawi*
I go, *woosa*
Come now, *ochoni*
I will go presently, *ero merothe weethage*
I will start at sunrise, *ihio maynha*
It is good, *idupani*
Where are you going? *oia moosa*
What's your name? *no cuyedu*
Good morning, *morabidge*
Good bye, *moosarabe*

XIV.—*On the Civilisation of the First Icelandic Colonists, with a short account of some of their manners and customs.* By Jón A. Hjaltalín, Esq.

[*Read May 7th*, 1867.]

By the first Icelandic Colonists I mean Scandinavians, although we know that Iceland was discovered by Irishmen, or Irish monks, at least some fifty or sixty years before the arrival of the Scandinavians, which is confirmed, not only by the fact that the latter found in Iceland on their arrival several huts, church-bells, books, etc., which they recognised as belonging to Irish monks, whom they knew very well; but it is also confirmed by an Irish author, Dicuil, who wrote a book in Latin about the year 825, in which he says that his countrymen had been in a country far to the north, which, according to his description, could not be any other country than Iceland. But, as they had no permanent settlement there, we know nothing more of them.

Iceland was first discovered by Scandinavians in the year 861, and they began to settle there thirteen years later; and in fifty or sixty years all the inhabitable parts of the island were inhabited. These settlers were, with very few exceptions, Norwegians, who either came directly to Iceland from Norway, or from the Shetland Islands, Orkney Islands, Hebrides, Scotland, and Ireland. The well-known conquest of Haraldr, the fair-haired, caused this emigration. About the middle of the ninth century Norway, like the rest of the Scandinavian countries, was divided into numerous petty kingdoms, and, in fact, every district had its own king, or earl, or chief. Haraldr resolved to unite all these petty kingdoms and become sole monarch of Norway, which object he effected after having defeated in many separate battles all those kings and chiefs that would not submit to his rule. In this respect he may be compared with King Egbert in England, who united the seven kingdoms under his sceptre.

There were many chiefs and noblemen, who chose rather to leave their country than submit to the tyrant, and, therefore, they went over to the lately discovered island, where they could enjoy their liberty "without being disturbed by kings and mischiefmakers," as they expressed themselves. These settlers in Iceland were independent chiefs and noblemen, sons of earls and kings. They brought with them, not only their retainers,

servants, and moveable property, but also the culture from thei mother country. They belonged to the nation that was so we known in England under the name of Danes, in France unde that of Normans, and at Constantinople and in many parts c the Mediterranean under the name of Væringjar (Βαραγγοι). I we had no records of them, except from the nations that suffere from their barbarous depredations, we might have no high ide of their civilisation; but, fortunately, we have in the ancien Icelandic literature accounts by themselves, not only of thei assaults upon other nations, but also of their doings at home and, although we frequently meet with numerous instances c barbarism in these accounts, yet we meet with facts and institu tions that are well worth the attention of modern times, an which portray no small degree of civilisation.

When the Norwegian chiefs came first over to Iceland the occupied vast districts, which they parted out again to thei friends and retainers. They brought with them their gods an temples from Norway, and established them in their new homes and the owner of the temple was not only a priest, but also a independent chief of the district of which he had taken pos session. Thus a kind of patriarchal state was formed in variou districts of Iceland. But soon the chiefs felt the necessity c uniting themselves by common laws and institutions; and i this respect the country was divided into several parts, eac part having its own meeting, or thing, where the inhabitant had their causes decided. Sixty years after the arrival of th Norwegians in Iceland, they had a general meeting, or parlia ment (Althing), for the whole country, and a code of laws wa sanctioned for the whole island. These laws were, for the mos part, formed in accordance with the laws of Norway. Thes laws were not committed to writing for two centuries, but wer handed down by oral tradition; and the president of th general meeting was considered the best living copy of th laws; therefore, he was consulted in all doubtful cases, and i such instances his opinion was the only valid one. In man respects these laws are very remarkable; and to mention single instance, capital punishment, in the modern sense of th word, was unknown to these ancient legislators. Instead c this, a man might be outlawed, that is, he might be deprived c the protection of the law, so that he might be killed with im punity by anyone, but that was by no means tantamount t a capital sentence. For generally only the person who carrie on the suit attempted to execute the sentence, and, indeed, h often put a price on the outlaw's head. Nevertheless, ver often the outlaw was able to escape for a long time, and, whe twenty years were passed from the date of the sentence, it wa

no longer valid. If the offence were of a public character, the culprit might have the sentence remitted, if he killed another outlaw. There were three means of settling a quarrel or a dispute, viz., by arbitration, by bringing on an action, or by duel. But it was no easy matter to bring a suit to a successful termination by way of law, as the Icelandic laws in general abounded in very complicated forms, so that even one single word left out or added might destroy the whole cause. Therefore, anyone who thought that his cause was in danger could, instead of pursuing it any farther, force his opponent to settle the matter with the sword. But duels were abolished by law as early as the year 1007, so that this expedient was soon cut off.

The constitution of the Icelandic commonwealth was strictly aristocratic. At the general meeting, or parliament, the legislative power rested virtually in the hands of the most powerful landowners or chiefs, and in their respective districts the smaller farmers were no more than their retainers. As above mentioned, the noble Norwegian settlers were self-made chiefs of the districts which they occupied, and those who settled in their districts became their dependants,—they paid a certain tax to the temple which the chief had erected in his district, and assisted him in his quarrels with other chiefs. He again maintained the temple at his own expense, decided the causes of his retainers, and protected them against any injury from another chief and his retainers. Thus he was the supreme authority of his district, both in spiritual and temporal matters. At the general meeting (Althing), all matters of importance were suggested and carried by the chiefs only, and in this they were assisted by their followers. The smaller farmers never opposed the will or the opinion of their chief or leader; to support his opinion was to them as a matter of course. When he had promised his assistance to another chief, they considered it their duty to follow him even for that intent. The spiritual power of the chiefs was very much modified by the introduction of Christianity, but the temporal power remained nearly in the same form during the existence of the commonwealth. Generally, this power was inherited by a son from his father. But if he were not powerful enough to protect his adherents, they were at liberty to place themselves under the protection of another chief. In this way the leadership of a chief might easily pass to another more powerful leader, although not entitled to it by inheritance.

Although personal valour and skill in arms were almost indispensable to every free-born man, yet warfare and fighting exercises were by no means the chief occupations of the ancient

Icelanders, and many of the most powerful chiefs were no good fighters. Even in Iceland, the chiefs themselves paid great attention to agriculture, and it cannot be denied that corn ripened in Iceland in these times, although we at present do not grow any corn. Thus we find on several occasions that the chiefs themselves were engaged in sowing corn, although they had many servants, both freemen and slaves. They also frequently engaged in fishing, and on one occasion we find a nobleman gathering in his own sheep. Skallagímr, the father of the celebrated Egill Skallagrímsson, had large ironworks at his farm, to which he attended himself along with his own servants, who were very much dissatisfied at his early rising. And on many occasions the chiefs themselves and their sons are said to have been engaged in repairing and even making their own arms.

Among the ancient Icelanders, trade was considered a very noble pursuit, and nearly every chief had in his younger days carried on trade with foreign countries. In these times the Icelanders carried on extensive trade with Norway, England, and Denmark. Their principal exports were the so-called "*vaðmál,*"—at the present time called *vadmell* in the Orkney Islands. It was woven stuff, used for clothing, manufactured in Iceland, and it was greatly esteemed in foreign countries. They also exported a great quantity of skins and furs. Occasionally they brought from Iceland living white bears as presents to the kings of Norway or Denmark. From abroad they imported timber and corn and fine clothes. Very little money —or, more correctly, silver and gold—if any at all, was employed in the trade; it was entirely a barter, except, perhaps, among the Icelanders themselves, for it was not unusual to lend out their goods on credit for some time, and be repaid with silver or gold as well as other things. Many persons acquired large property by their trade. Their chief means of support were, nevertheless, the same as at present, the rearing of livestock, sheep, goats, cows, horses, pigs, and poultry. Therefore, haymaking was the chief employment during the summer months.

However, it is not easy to ascertain the exact state of industry among the ancient Icelanders. We know that they manufactured *vaðmál;* and, nevertheless, imported stuffs and clothes were thought much more of than the home-made ones; we also know that they executed work of blacksmiths, carpenters, joiners, goldsmiths and silversmiths, although it was not developed into trade; there are still left a few specimens of their workmanship of no mean quality. Some of the earliest settlers established iron-foundries in the country, but it appears that

they had soon to be given up. On the whole, I am sorry to say, we are at present not much further advanced in industry or in the arts of life than our earliest ancestors.

As you may suppose, there were not many scientific people among the earliest Icelanders; yet law was very much cultivated, principally by the chiefs, and a man well skilled in the various forms of the laws had indeed great power in his hands; as there were no written copies of them, the living representatives were the more precious, and often their assistance was of more importance than that of many warriors. The earliest Icelanders made very little use of writing, although they had the runic alphabet; but it was very little used except for inscriptions and magical purposes. The Icelanders brought with them from Norway the mythological songs, which were afterwards collected, and are now so well known under the name Sæmundar-Edda. It may be said that the Icelanders made poetry a study; and, after the colonisation of Iceland, we have almost ten Icelandic poets, or skalds, to one Norwegian; almost all poets mentioned at the courts of the Norwegian kings and the Danish kings and the English kings were Icelanders. But their poems are very different from the simple yet powerful Eddaic poems; and, although many of them have some poetical worth, too many are nothing but artificial verse-making; and the true poetical taste became so perverted that it was thought the greatest accomplishment to make the poems so complicated that it is next to impossible to make anything out of them. It was a great advantage for the Icelandic skalds that the same language prevailed all over Scandinavia, and partly, at least, in England; and it may also be considered beyond doubt that Scandinavians and Anglo-Saxons could in those times understand each other, speaking their respective languages. At the same time it is mentioned that the Scandinavians or Icelanders could not understand Irishmen. The language which prevailed all over Scandinavia and partly in England, on the coasts of Scotland, and in the Orkney Islands and the Shetland Islands, was the language which is now called *Icelandic.* The Icelanders also took a very great interest in history and genealogy. Almost every chief was able to trace his ancestors up to the gods, and he also knew their deeds and exploits for many centuries back. It was one of the principal entertainments at their meetings and festivals to relate stories (sagas), and many Icelanders were living libraries of, perhaps, forty or even fifty sagas. Events from the sagas were woven in the hangings of their rooms and carved on the walls. All these sagas were preserved during several centuries by oral tradition, until they were committed to writing in the twelfth and thirteenth centuries.

We have good reasons to suppose that the Scandinavians were skilled in astronomy, for it would not otherwise be easy to account for the long and dangerous voyages which they successfully performed, if they had not some knowledge of the celestial bodies; and, indeed, it is mentioned in the sagas that the mariners were always able to steer their true course when they could see the sun and the stars. And about the middle of the tenth century, the Icelanders observed that the reckoning of time was not correct, and in consequence, by the advice of an Icelander, Thorsteinn Surtr, who is said to have been very well skilled in astronomy, it was sanctioned by law at the Althing that a week should be added to the summer every seventh year, which rectified the current time exactly. Moreover, besides the common chronology, we preserve that of Thorsteinn Surtr also in our almanacks, and the two agree very well. This Thorsteinn Surtr, and some others, are said to have spent the long winter nights in observing the stars, and so they acquired their knowledge of astronomy.

Medical practice was almost without exception exercised by ladies, and the sagas often mention that ladies were good healers and skilful in dressing wounds and curing them, but their medical skill seems not to have extended further.

Public amusements were not unknown to the ancient Icelanders; the most common were ball-playing and wrestling, and sometimes also swimming matches. In every district, almost without exception, people assembled at a certain place in open air for this purpose; these meetings were also frequented by ladies as spectators. Not youths only, but also grown men, and even the chiefs themselves, joined in the game, which sometimes did not end without bloodshed. Generally these meetings took place during the autumn and in winter. The people brought with them tents and provisions, and the meeting lasted sometimes for a fortnight. We may also suppose, with great probability, that they told stories and recited poems at these meetings as well as at others, although it is not mentioned. On the other hand, ball-playing and wrestling also took place at other meetings.

Horse-fights were not uncommon, and they brought together numerous assemblies; this custom prevailed in Iceland even to the beginning of the seventeenth century. When two persons or more had horses (stallions) good for fighting, they made an appointment to let them fight; when it was known in the district that a horse-fight would take place, numerous spectators assembled; for the friends of the parties were scarcely less interested in the fight between their friends' horses than in duels between their friends. Either the owner of the horse or another

man appointed by him attended the horse at the fight, and irritated it with a stick. Almost always, when either of the horses was beaten, the men themselves engaged in even a more exasperated and dangerous fight than the beasts had done, so the spectators were obliged to interfere.

There were three general religious feasts in every district; one in January, the second in March, and the third at the beginning of the summer. The inhabitants of the district assembled at the house of their chief, and brought thither provisions for the feast; but the chief performed the duties of a priest, and brought up sacrifices to the gods to procure favourable seasons and success to himself and his people; these sacrifices consisted in cattle and ornaments in gold and silver; in Iceland, at least, human sacrifices were very rare. Much eating and drinking and merrymaking took place at these festivals, and they generally lasted for several days.

The chiefs generally invited a great number of friends to weddings and funerals, and they gave them grand entertainment sometimes for a couple of weeks; and, when their guests departed, they presented them with costly and splendid gifts, consisting generally of rings and ornaments of gold, weapons, cloaks, and sometimes of horses. On one occasion we are informed that the wedding guests were nine hundred in number. On another occasion the sons of a chief instituted a funeral festival after the death of their father. At the general meeting, they invited the whole assembly to join in the party, and one thousand two hundred availed themselves of the invitation. All had some presents given to them at their departure from the feast. Besides this, chiefs used to invite each other in turn, and exchange presents. On these occasions the recital of sagas and poems was a favourite amusement.

I hope that you may see from this short and imperfect account that the ancient Icelanders possessed no small degree of civilisation for those times, and in navigation, for instance, they were unsurpassed by any other nation. It is, indeed, very interesting to read the accounts of their manners and customs in the Icelandic sagas; which contain an extensive description of their lawsuits, festivals, and amusements which I have mentioned, but if I had quoted the sagas in full the paper had been too long. I am sure, however, that these accounts would be very interesting to Englishmen, and you would certainly find many peculiarities in the Scandinavian character, which, perhaps, nowhere have been preserved so well, even to this day, as in England.

XV.—*Further Remarks on the Ethnology of the Chinese.* By Dr. LAMPREY, Surgeon 67th Regiment.

[*Read May 7th*, 1867.]

WITHOUT entering into minute measurements of the skulls of Chinese from the Suchow area now before the Ethnological Society, we can readily detect a difference of form in each of them, and are able to observe certain facial characteristics which serve to typify the group, and chief among these characters we see the wide interval between the cavities occupied by the orbits; there is also a certain amount of prominence of the outer margin of the malar bone, consequent on the spring of the zygomatic arch, but not to a sufficient extent to make this very apparent in the living face; and the nasal bones face forwards, and not laterally, as in the European type; they are flat, and give little prominence to the nose. In some instances there is a tendency to project into a ridge, but only after a very rudimentary manner. If we compare these skulls with two others belonging to Cantonese, we find the malar bones of the latter project outwards in a more decided manner; and we find a corresponding prominence in the face of the Cantonese, while the apparent interval between the eyes remains fully as wide, and the nasal bones are circumstanced as in the Suchow skulls. The form of these skulls might be designated dolichocephalic when compared with the more brachycephalic skulls from Suchow. While comparing these heads with each other, to show the heterogeneous character of the inhabitants of China, I may take this opportunity of comparing these skulls with a skull of a Hottentot from South Africa. I received this skull from Dr. Egan, when at King William's Town, Cape of Good Hope, last year, so that its authenticity can be vouched for. He had two of them, one of which remains in his possession; their resemblance to Chinese skulls was at once so striking, that I requested him to give me the one before the Society. I think there will be no difficulty in coming to the conclusion that there is no slight resemblance between it and the Chinese groups, especially with the Cantonese. We find the Chinese characteristic wide space between the orbits, and the flat unprojecting nasal bones, while the malar bones are very nearly as prominent. The skull apparently has not the same capacity as the Chinese skulls, being rather depressed and elongated, perhaps indicative of a lower type of intelli-

gence. The opportunity of comparing these skulls is important, as it has already been surmised by travellers that the Hottentot has some affinity to the Chinese. We find this noticed by Barrow, who gives illustrations of the two races, and makes the following statement.

"It is probable, therefore, that the navigation of the Eastern Seas was known in the earliest periods of history, and there seems no reason for supposing that the Chinese should not have had their share in it. Without, however, making any inquiry into the probability that an ancient intercourse might have subsisted between China and the East Coast of Africa, either by convention for commercial purposes, or that Chinese sailors might have been thrown on that coast either in Phœnician, or Arabian, or their own vessels, I happened to observe in a former publication of *Travels in Southern Africa,* as a matter of fact, 'that the upper lid of the eye of a real Hottentot, as in that of a Chinese, was rounded into the lower on the side next the nose, and that it formed not an angle as in the eye of an European—that from this circumstance they were known in the colony of the Cape by the name of Chinese Hottentots.' Further observations have confirmed me in the very striking degree of resemblance between them. Their physical characters agree in almost every point. The form of their persons in the remarkable smallness of the joints and the extremities, their voices and manner of speaking, their temper, their colour and features, and particularly that singular shaped eye, rounded in the corner next the nose like the end of an ellipse, probably of Tartar or Scythian origin, are nearly alike. They also agree in the broad root of the nose; or great distance between the eyes; and in the oblique position of these, which, instead of being horizontal, as is generally the case in European subjects, are depressed towards the nose. A Hottentot who attended me in travelling over Southern Africa was so very like a Chinese servant I had in Canton, both in person, features, manners, and tone of voice, that almost always inadvertently I called him by the name of the latter. Their hair, it is true, and that only, differs. This in a Hottentot is rather harsh and wiry than woolly, neither long nor short, but twisted in hard curling ringlets resembling fringe. I possess not a sufficient degree of skill in physiology to say which kind of hair the offspring would have of a Chinese man and Mozambique woman; much less can I pretend to account for the origin of the Hottentot tribes, insulated on the narrow extremity of a large continent, and differing so remarkably from all their neighbours, or where to look for the primitive stock unless among the Chinese.

"I am aware it will appear rather singular to those who may

have attended to the accounts that generally have been given of these two peoples, to meet with a comparison between the most polished and the most barbarous, the wisest and the most ignorant of mankind; and I am, therefore, the less surprised at an observation, made by the writers of the *Critical Review*, 'that the fœtus of the Hottentots may resemble the Chinese as the entrails of a pig resemble those of a man;' but on this topic our ingenious author seems to wander beyond the circle of his knowledge. I hope these gentlemen will not be offended at my taking this occasion to assure them that the comparison was not even then made on loose grounds, although no inference was drawn from it, and that on a closer examination, I am the more convinced of their near resemblance in mental as well as physical qualities. The aptitude of a Hottentot in acquiring and combining ideas is not less than of a Chinese, and their powers of imitation are equally great, allowance being made for the difference of education; the one being continually from his infancy brought up in a Society where all the arts and conveniences of life are in common use; the other among a miserable race of beings in constant want even of the common necessaries of life.

"But as assertions and opinions prove nothing, I have annexed the portrait of a Hottentot, drawn from the life by Mr. S. Daniell, in order to compare it with one of a Chinese, taken also from the life by Mr. Alexander; and I have no doubt that a close comparison of these portraits will convince the reader, as well as the reviewer, that the resemblance I remarked to have found was not altogether fanciful." (Barrow's *Travels in China.*)

If we compare the drawings of Hottentots in Daniel's work in South Africa, with the photographs of Chinese, we find that what Barrow says receives much confirmation. The portrait of a Korah girl and the photograph of the attendant in the group of a family from Ningpo have considerable resemblance with each other in the obliquity of the eyes, the wide interorbital space, and the prominent cheeks; but there the resemblancec eases; we see no resemblance in the other features; the nose of the Hottentot is wide-spread at its alæ, the lips are thick, and if we were to extend the comparison further to the hair, we would find the woolly head, another characteristic of that Negro contamination which does not show itself in her Chinese sister. On looking over the skulls of the African races in a large collection in the museum of the Victoria Hospital at Netley, I noticed in a skull of a Bushman, No. 423, having the integuments on it, that the hair was long and straight, instead of being woolly; and that, in all the skulls of

the class, the interorbital space was remarkably wide, No. 390 being particularly striking. The photograph of a Cantonese would bear some resemblance to the portrait of the Bosjesman in Daniel; and in the portrait of the female Hottentot we observe a case of extremely prominent cheek-bones. We recognise also in the portrait of the Bushman a form of head cover, which so closely resembles that worn by the Chinese in summer, that both it and the parasol extemporised from ostrich feathers, struck me as peculiarities which might be traced to a Chinese origin.

Another point of Chinese and Hottentot resemblances might be recognised in one of the beautiful portraits of the inhabitants of South Africa made by Mr. Baines; it represents a Bushman to the west of Lake Ngami, with his bow and quiver of arrows, which are the primitive weapons of Chinese. This portrait is particularly valuable as it represents the colour of the skin of this race of people, which is yellow, and in some degree resembles the more Southern Chinese. Now the question arises, was it possible for Chinese to reach Africa by sea? History tells us they carried on trading expeditions to the Persian Gulf at a remote period; nor was this unlikely, when once the Arab traders visited the coast of China; and, making voyages so far, they were very likely to extend them to the coast of Africa, probably not as slave merchants, for, if they imported the Negro, the evidence of Negro contamination would be apparent in China as in India, but in search of the valuable furs of the wild animals of South Africa, and for ivory.

We might also suppose, for we have no direct evidence to offer, that, as in the Pacific on the east, some unfortunate roving Chinese junks may have got into the Southern Indian Ocean through the Straits of Anjer, Malacca, etc., and meeting with stormy weather, may have been carried westward by the south-east trade wind too far to return, and so reached the southern coast of Africa, where they were carried by the current southward along its surf bound shore, and were either wrecked upon it, or, reaching one of the few harbours in safety, became unwilling colonists.

I do not consider that philology will assist in tracing any affinity between the Chinese and the Hottentots, on account of the continued change in the sounds of words in the monosyllabic language of the Chinese, and still more so on account of the absence of written literature in the South African. In reference to this subject I may quote from one of the most observant of the South African Missionaries, whose remarks are particularly valuable. The Rev. Mr. Moffat says:—"On such occasions, fathers, mothers, and all who can carry a burden,

often set out for weeks at a time, and leave their children to the care of two or more infirm old people. The infant progeny, some of whom are beginning to lisp, while others can just master a whole sentence, and those still further advanced romping and playing together, the children of nature, through the live-long day, become habituated to a language of their own. The more voluble condescend to the less precocious, and thus from this infant Babel proceeds a dialect composed of a host of mongrel words and phrases joined together without rule, and in the course of a generation the entire character of the language is changed."

It may be worth while remarking that the Hottentot mode of salutation is, "What do you eat there;" and the Chinese say, "Have you eaten food."

XVI.—*On the History and Migration of Cultivated Plants used as Condiments.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read June 11th*, 1867.]

OF all vegetable condiments, one of the most extensively used is black pepper. This is the *piper nigrum* of botanists, a vine, or scandent plant, one of some fifty species of a genus to which it gives name, as it does also to a natural order, the *piperaceæ*. It is exclusively a tropical plant, and confined to Eastern Asia and its islands; its geographical range not going beyond twelve degrees from the equator. Its native country is most probably Malabar, on the most southern part of the west coast of India, where it is found wild, and where it has been immemoriably cultivated. We find it again, but not wild, and only as an object of cultivation, in some of the more westerly parts of the islands of the Malayan Archipelago, such as Sumatra, Java, and the Malay Peninsula; and finally we find it a cultivated plant, but possibly also a wild one, on the eastern coast of the gulf of Siam, in a latitude, and seemingly a locality and climate, corresponding with those of Malabar. Beyond the countries now named, it has never been an object of cultivation, and it is they that have exclusively supplied the rest of the world with it, by far the greater part being the produce of the western side of Sumatra.

In the language of that part of Malabar which is more especially the native country of the black pepper plant, its name is *malago*. This language is the Malayalam; in Sanskrit its name is *maricha*, corrupted in Hindi into *mirch*; in Persian it is *pilpil*, and the same in Arabic—the *p*, a sound which does not exist in the Arabic being here converted into *f*. The Persian word is, I have no doubt, taken from the Sanskrit, but oddly enough it does not come from the name of the black pepper, but from that of another species of the same genus, the long pepper, which in Sanskrit is *pipala* or *pipli*. All the European names obviously come from the Persian, for it was through Persia that the Greeks and Romans most probably first received their earliest supply, although in later times it would, no doubt, come chiefly by the easier route of the Red Sea and through Egypt. In Greek we have the name as *peperi*, the form of the word which comes the nearest to the Persian. In the Latin, taken from the Greek, the word becomes *piper*, and hence all the European names, as the Italian *pepe*, the Spanish

pimiento, the French *poivre*, the English *pepper*, the Dutch *piper*, and the German *pfeffers*. In all these cases, the principal difference consists in the exchange of one liquid for another, and in the instance of the Arabic and German of one labial for another. All are referable to the Persian word, and the Persian itself to the Sanskrit. How the name comes to be derived from the long, and not the black, pepper, is, I think, only to be accounted for by the supposition that the Hindus of Northern India had become earlier acquainted with the long than with the black pepper, the growth of which has a much wider geographical range. This view is conformable to fact, for the long-pepper plant is found both wild and cultivated as far north as the thirtieth degree of latitude, even extending to the first ranges of the Himalayas. Long pepper would, therefore, be the article which the Persians would receive in the course of trade with India, and most probably it would hence be the commodity first known to the Greeks and Romans under the names of *peperi* and *piper*.

Pepper, in the time of Pliny, was a condiment of considerable consumption in Rome, and he quotes its price at 15 denarii the pound. Reckoning the denarius at 8½*d.*, and the Roman pound at one-fourth part less than our own, the cost of a pound avoirdupoise of pepper in the Roman market would, in our money, be about 14*s.* 9*d.* The average price of a pound of pepper in the London market has been for a good many years back about 3½*d.* a pound. For English pepper, we may call the present price about 7*d.* In so far as his consumption of pepper is concerned, a skilled English artisan earning £100 a-year, is on an equality with a Roman senator with an income of £5,000 a-year! This, on a small scale, is an example of the benefits which the accumulated knowledge of eighteen centuries has conferred upon us.

It may be presumed that the price of pepper quoted by Pliny, was that of the article brought by the costly overland route through Persia. At a later time it is probable that the price had fallen, for after the Roman dominion was fully established in Egypt, a direct maritime intercourse came to be carried on between that province and the western coast of India under the guidance of the monsoons. In this intercourse, pepper formed the staple article of trade, for we are expressly told in the Periplus of the Erythrean Sea that the Greek and Roman vessels which traded with the pepper ports of India were larger than those which were employed in the trade of of the other ports of India, on account of the bulk and quantity of their return cargoes.

In the Malay language the name given to black pepper

is *lada*, to all appearance a native word. It is the same in the Sunda, the language of that part of Java which is in proximity with Sumatra, the main pepper-producing island of the Archipelago. In the language of the rest of Java, the proper Javanese, the name is the unaltered Sanskrit *maricha*, and from the Javanese the word has been extended to the language of Bali, and to the more cultivated among the tongues of Celebes. In the Siamese language, black pepper, to distinguish it from other plants having corresponding qualities, is called prik-thai, which literally signifies "Siamese pepper," as if the Siamese themselves, at least, considered it as an indigenous product of their country. *Prik* is a generic term in Siamese, as *lada* is in Malay and *maricha* in Sanskrit, and indeed *pepper* with ourselves.

The native country of the black-pepper plant is, as already stated, most probably Malabar up to the twelfth degree of latitude; there alone, so far as India proper is concerned, it is found both wild and cultivated. But it exists also in the cultivated, and may in the wild, state in a corresponding latitude and locality on the eastern side of the Gulf of Siam, for it is claimed by the Siamese as an indigenous plant, as we find by the name given to it in their language. In the Malay Archipelago I am disposed to consider black pepper an exotic introduced most likely from India. I come to this conclusion from finding its culture confined to these parts of the Archipelago which lie nearest to India, which were chiefly those frequented by the Hindus, together with the absence of the plant in a wild state throughout the Archipelago, and the inferiority of the produce of the cultivated plant to that of Malabar. This difference in the quality of the two commodities has been constant ever since the first appearance of the Portuguese in India, now better than three centuries and a-half ago.

For determining the parent country of the black pepper vine, however, evidence drawn from philology must be received with hesitation. The names usually applied to it in most of the Indian languages were either originally generic ones, or in time have become so. Thus the word *maricha* in Sanskrit is a generic one, and requires an epithet to express black pepper, while by another epithet it expresses the capsicum. The word *lada* in Malay, without an epithet, usually signifies black pepper, but with the word "long," it is used to express, as with ourselves, the *piper longum*, and, with the epithet "tailed," the cubeb pepper. Such, however, is not the case in the Javanese, the most cultivated tongue of the Malayan Archipelago, in which the Sanskrit word is the specific one of the black pepper, while the long pepper, the cubeb, and the

cum have special names. The Sanskrit word being the fic name of black pepper—indeed the only one found in ıese, would lead to the belief that it was Hindus who first duced the plant into Java, but if this were so, it is cer- :hat it was not introduced directly from its native country, bar, since it does not bear the name which it has in the ıage of that part of India.

nay here add that our own language follows the example e oriental tongues in making the word pepper a general as in the examples of black, long, and red pepper. So indeed, has the word been in familiar use, that we even ɔy it metaphorically. Thus, as a verb, we make it to signify heat," "to mangle with shot or blows," and to season y; while, as an adjective, we have it signifying "hot," ,," and "angry." Then we have it as a compounded noun pper-corn, signifying something very inconsiderable. I ıoting Dr. Johnson's definitions.

all the commodities which come under the head of ies, black pepper is, after sugar, tobacco, and perhaps ɔum, that of most universal consumption, and this it owes y to its cheapness. It has been immemorially in use by ıe people of Asia who have attained any considerable nt of civilisation, from the Bosphorus to Japan, and it has almost immemorially in use by the nations of Europe, since the discovery of America, by all the civilised inha- ts of the New World. There is, however, one exception :s, and it is a singular one: it is that of the producers selves, and this observation applies equally to the clove ıutmeg. These commodities are hardly used at all by their ers, and are all produced by them for strangers.

me estimate of the consumption of the nations of Europe e article of black pepper may be formed from our own ıgs of it. We import some fourteen millions of pounds ıt in it, of which we furnish other nations to the extent of nillions, consuming ourselves four millions of pounds, to a consumption per head of two and a quarter ounces.

e two commodities of which I have next to give some :nt, are, the cloves and nutmeg, which, however, unim- nt now in the trade of the East, formed three centuries he most considerable, or at least, the most envied branch Their history in an ethnological sense is of deep interest, it was the effort to reach the country producing them by nly race of man capable of conceiving and achieving such prises, which led to the discovery of a new world, to the nnavigation of the globe, and which, for the first time ɔ history of the world, brought nearly all the races of man

to knowledge of each other's existence. The Portuguese sailing eastward, reached the clove and nutmeg islands in the year 1512; while the Spaniards, with a Portuguese pilot, pursuing an opposite course, reached them in 1521, only nine years later. The discovery of the spice islands, therefore, had not been made by the Spaniards until near twenty years after the discovery of America, and the Portuguese had been fourteen years in India before they attained the original object of their search. A steam-vessel of moderate power would with ease and safety accomplish the voyage from Calicut to Ternate in a fortnight's time—such is an example of the difference between the navigation of the sixteenth and of the nineteenth century.

To begin with the clove, the *Caryophyllus aromaticus* of botanists; it is a tree of the size of an ordinary forest tree, of the same natural family with the myrtle. It bears fruit in its seventh year, and lives up to the age of 150 years. It is the only species of the genus to which it belongs, and of all cultivated plants it has the most limited geographical extension, for it exists only in the wild state, while even uncultivated it attains the highest perfection only in the five small islands called by the Europeans the Moluccas, which lie within fifty miles on each side of the equator, and about east longitude 127°. These are all of volcanic formation, and so small as to be always within the influence of the sea-breeze. Even Amboyna, close to the Moluccas, is not one of them; and even here, although made by the European monopolists the principal seat of production, the tree does not attain above one-half the length of life that it does in its native habitat. The clove-tree has been immemorially a cultivated plant, as shown by the superiority of the fruit of the cultivated over that of the wild plant, and by the first running into varieties.

Many attempts were made by the other European nations to wrest, first from the Portuguese, and then from the Dutch conquerors of the Spice Islands, the monopoly of which they had possessed themselves, by transferring the culture of the plant to their own equinoctial colonies, but with very slender success. The experiment has been tried in Bourbon, in Cayenne, in the British possessions in the Straits of Malacca and western coast of Sumatra, and even by the Arabs in the island of Zanzibar, but the tree has either failed to produce fruit, or produced it of not one-half the value of the produce of the parent country of the clove.

It is, however, the history of the clove trade with which we are concerned as an ethnological question, and of its culture it may be enough to say that the plant, unlike tobacco, maize, the sugar-cane, and other staples, has in its perfection a very

narrow geographical range, so that the islets which are its native country may be said to possess a natural monopoly in it.

There is no evidence to show that the early Greeks and Romans, or even their cotemporaries the Hindus, were acquainted with the clove or the nutmeg, the last a product of nearly the same far islands as the first. In the long list of commodities given in the *Periplus of the Erythrean Sea* as existing at the emporia of the western coast of India frequented by the Greek traders of Egypt, no mention is made of these two commodities. The first authentic account which we possess of the clove and nutmeg trade we have from the Portuguese after their arrival in the islands producing them. At that time, the early part of the sixteenth century, the parties who conducted the first stage of the spice trade, or who traded directly with the natives of the producing islands, themselves illiterate and unenterprising barbarians, were the Malays coming from Sumatra and the Malacca, and the Javanese from their own island, with Chinese and Hindu settlers in the western parts of the Malay Archipelago. The most current names of the clove are not taken from the language of the growers of the plant, but from the languages of the parties who carried on the first stage of the trade in it. In the languages for the two nations conducting the internal trade of the Archipelago, the Malay and Javanese, the clove bears two names, *lawang* and *chânghek*. The first of these is Sanskrit, through the Telugu or Telinga Hindus, who were in all known times the people that carried on the commercial intercourse between India and the Archipelago. The second is supposed, with much probability, to be a corruption of the Chinese name, *hiang-ting*, which signifies "fragrant nails." There is, however, another foreign name for the clove of mere local use, *gomedi*, which my late learned and esteemed friend, Horace Wilson, readily traced to the Sanscrit *gaumedhi*, signifying "cow's marrow."

Proceeding to the names given to the clove in the languages of Continental India, we have it in Sanskrit as *lavunga*, in Hindu as *laung*, in Telegu as *la-wung*, and in Tamil as *lavang*, all these words being essentially the same, and it is to be presumed originating with the Sanskrit. The Persian and Arabic name for the clove is *karanful*, from which comes the Greek *karyophyllon*, and from this again the Latin *caryophyllus*. From the Latin come the flagrant corruptions, *garofana* in Italian and *girofle* in French. But the near resemblance of the clove to a tacket or small iron nail, suggested the most current name, and originated with the Portuguese, the first European people who saw the clove at its native place of

growth. "Generally," says the Portuguese historian, Dr Cauto, after giving with considerable accuracy the Oriental names of the clove, "all nations give them a name of their own as we have done, for the first of us that reached these islands (the Moluccas), taking them in their hands and observing their resemblance to iron nails, called them *cravo*, by which they are now so well known in the world." So then, from the Latin *clavus*, comes the Portuguese *cravo*, the Spanish *clavo*, the French *clou*, the German *kloben*, and the English *clove*. The Dutch call cloves *kruid-nagel*, that is, "vegetable nails," and, as already stated, the Chinese give them the name of "fragrant nails."

Although the *Periplus of the Erythrean Sea* makes no mention of cloves, this article is expressly named in a celebrated law of the Digest of the reign of the Emperor Aurelian, the date of which is computed at from the 176th to the 180th year of our era. It is there stated to have been an import into Alexandria, which implies that it came by the maritime route, by which, through help of the monsoons, the trade between Egypt and the ports of Western India was at that time carried on, for Egypt had now for two centuries been a Roman province. The Greeks engaged in this trade could obtain the clove only at the ports of Western India, for they never went themselves beyond them. The question then is, by what route this commodity, the produce of islets distant by a navigation of at least 4000 miles, reached the western coast of India and its trading emporia. The inhabitants of the Moluccas were a rude people, who seldom or never went beyond their own islands, and indeed were not even consumers of their own most remarkable production. They must, therefore, have grown the clove for foreign consumers, just as the Malays and other nations of the Archipelago grow pepper and coffee, which they do not themselves consume. These foreign consumers of the clove were, I imagine, in the first instance, the more civilised nations of the western portions of the Malayan Archipelago, the Malays and Javanese, who are ascertained to have immemorially carried on such inter-insular trade as existed in the Archipelago, and whose presence not only as traders but settlers is testified by the existence of much of their languages in all the ruder tongues, even to some extent reaching as far as the languages of the Islands of the Pacific. On the arrival of the Portuguese at the Spice Islands, in the first years of the sixteenth century (1512), they found the spice trade actually carried on by the Malays and Javanese, who conveyed the clove and nutmeg, with other productions of the same part of the Archipelago, to its western emporia, such as Bantam in Java,

Malacca in the peninsula, and Achin in Sumatra. At these emporia, the Malay and Javanese traders were met by the traders of Continental India, the Telugus or Telingas of the Coromandel, and the Tamils of both the Coromandel and Malabar Coasts, who conveyed the clove and nutmeg to their own country, the western shore of the Gulf of Bengal, to be thence distributed over India and the emporia of the western side of India. At this last point they would be received in the earlier period of trade by the Greek merchants of Egypt, and in the latter by the Arabian traders of the same country.

It seems probable, as already stated, that the first strangers who consumed the clove and nutmeg were the more civilised inhabitants of the Archipelago, the Malays and Javanese, who still consume them, as well as some other articles of the produce of the same countries, the use of which has never extended beyond them, such as the *kulit lawang* or clove-bark, the production of a species of laurel which they largely use as a cosmetic. The Hindus and Chinese would acquire a knowledge of the clove and nutmeg from the traders of their own nations frequenting the Archipelago, and, in due course, the taste for them and their consumption would follow. West of India, as far as the remote nations of Europe, reckoning only from the date of the Roman law above referred to, the clove (the nutmeg is not named in it) has been known in Europe, and of course in India, for the long period of close on seventeen centuries.

The present cost of cloves compared with their cost before the discovery of the route by the Cape of Good Hope is a fair example of the progress made in trade, navigation, and even in political science, since the time of Henry the Seventh. Brought by the overland route, the price of a pound of cloves in the London market was in his time eight shillings, and the average price of Molucca cloves has been for some years back no more than one-eighth of this amount.

The nutmeg is the *Myristica maschata* of botanists, one species of a numerous genus of plants found in all the islands of the Malayan Archipelago, in many parts of tropical Asia and America, while at least one species of it has been found in Australia. But of these many spices only one is so aromatic as to be used as a condiment. The geographical bounds of this species are but very little more extensive than those of the clove, for they lie between the 126th and the 136th degrees of east longitude, and the third degree of north and seventh of south latitude. Within these limits the true nutmeg is found wild, but when this quarter of the world was first visited by the Portuguese, the culture of the tree was confined to the five

little islets known to navigators as the Banda group, and at these was the emporium to which the native traders of the western parts of the Archipelago resorted, not only for nutmegs, but also for cloves, which, for convenience, were conveyed thither as being more in the direct route from Sumatra and Java than the Moluccas, a fact expressly stated by the first Portuguese voyagers.

At the close of the last century, when the English were in temporary occupation of the Molucca and Banda Islands, they conveyed the nutmeg tree to Penang and to Benoolen, in Sumatra, and from thence it was introduced into Malacca and Singapore. Beyond these places the nutmeg has not been cultivated for practical purposes, and success has certainly not warranted the prosecution of its cultivation. The life of the nutmeg tree, which, in its native country, reaches seventy-five years, is said in Penang not to exceed half that duration. In its native country it grows with very little care, producing very good fruit even in the forests of New Guinea. In all the settlements within the Straits of Malacca, and in those on the western side of Sumatra, it requires artificial shelter and manuring. But worse than all this, a murrain has attacked the plant—at least in all the settlements of the Straits of Malacca, now of some years continuance, and which threatens its total extermination. The attempts, then, to transform the culture of the nutmeg to other countries than its native ones, may be said, after having been conducted for more than sixty years with great skill and perseverance by both European and Chinese cultivators, to have proved a failure. Its temporary success was chiefly owing to the high price of the commodity by the monopoly exercised in its production in its parent country, and as this has now ceased, there can be no reasonable expectation of the restoration of the culture in strange lands.

The history of the nutmeg trade is the same as that of the clove trade, the parties carrying it on and the route being the same. To all appearance the nutmeg was diffused over India, Western Asia, and Europe, along with the clove. In Sanskrit the name of the nutmeg is *jatiphul.* This is a compound word, which signifies "fruit for the jessamine." The term taken in its literal sense betrays an utter ignorance of the nature of the commodity. The same word becomes in Hindi *jaephul;* in Tamil it is *jadakai,* in Persian *juzbua,* and in Arabic *juz,* which seems but an abbreviation of the Persian.

As to the European names, the Greek and Latin word, *myristica,* is said to be taken from the Greek *murra,* myrrh, from a supposition that the odour of the nutmeg bore some resemblance to that of myrrh. The *Nux moschata* of the Latin

is not, I believe, a classic term, but belongs to low Latin, and signifies simply the "musk-flavoured nut." It is, however, the origin of the Italian and Spanish *moscada*, and of the French *moscade*, the vernacular term for "nut" being generally prefixed in both languages. Our own name, nutmeg, does not appear to be very satisfactorily traced. Johnson, and he is followed by Richardson, derives it from the French adjective *muguette*, with the Anglo-Saxon word "nut" prefixed. In French *muguette* comes from the verb *mugetter*, which signifies "to play the fop or coxcomb." The etymology, however, seems forced, unnatural, and eminently unsatisfactory.

In the Malay, the Javanese, and the two cultivated languages of Celebes, the name of the nutmeg is *pala*, which seems to be only a slight corruption of the last portion of the Sanskrit name, signifying simply "fruit." This, however, was only the name given to it by the parties carrying on the first stage of the foreign trade in spices, and I have no doubt the tree has as many native names as there are languages amongst the rude tribes in whose country it is indigenous. I know but one of these, which is *gasoe*, and it belongs to the language of Ternati, one of the Moluccas, which is within the geographical limits of the nutmeg, and I get it from the work of the accurate and indefatigable botanist Rumphius.

Under the names of cinnamon and cassia, words taken from the Greek and Latin, two condiments have been in immemorial use in Europe and Asia. These commodities are the bark of tropical and subtropical trees of Eastern Asia and its islands only. They belong to the natural family of the laurels, and recent botanists comprehend them under the single genus, *Cinnamomum*. They consist of at least a dozen species, varying greatly in the quantity and quality of the essential oil which gives them their peculiar property. With Europeans, the highest quality is assigned to the cinnamon of Ceylon, the *Cinnamomum zeylanicum* of botanists; but by the Chinese to that of Anam or Cochin China, the *Cinnamomum aromaticum*. Other species of the genus go under the name of cassia; the only ones among these of commercial importance being the productions of the eastern provinces of China, and of the southern of Japan.

There is no difficulty in tracing the different species of cinnamon to their native countries, for, with rare exceptions, they have not been cultivated, and are still the mere wild produce of the forest; a fact which shows how limited has been the demand for them, and how entirely they differ in this respect from the staple articles of human food, the first culture and local origin of all of which are lost in the darkness of antiquity.

From the names given to cinnamon in different languages, no satisfactory evidence of the progress of the trade in it in remote ages can be adduced. I imagine, however, that the different species will be found to have distinct names in all the languages of the countries in which they are indigenous. In the native language of Ceylon, the name is *kurunda*, a word which has not been borrowed by any Hindu or other foreign tongue. In the language of the Tamils, the nearest neighbours of the Singalese, and who have long settled in Ceylon, forming a great portion of its present population, the name is *lavangkapati*, a word, the first two syllables of which make the Sanskrit name of the clove. The usual name for cinnamon and cassia (the Hindus make no distinction between them) is, in the Hindi language, *darchini*, usually, by the mere substitution of one liquid sound for another, pronounced *dalchini*. This is a compound word signifying "Chinese wood," the first part of the word, at least, being Sanskrit. From this it may be inferred that the cinnamon, which has been immemorially in use as a condiment by the Hindus—at all events of the Hindus of Upper India—has been imported by sea or land from China; and, indeed, it is to be observed, that none of the species of cinnamon produced by India itself, are of much value as a condiment. The only countries producing a cinnamon fit for general use, it may be here noticed, are Ceylon, China, Japan, and Anam. The produce of the last named country finds a foreign market in China only, and that Ceylon did not supply India may, I think, be inferred from the Singalese name not having been adopted in any Hindu tongue.

The name for cinnamon in the Pali language, as quoted by Sir Emerson Tennent, is *lamago*, which may be also its Sanskrit one, since the Pali is but a broken Sanskrit. In the Malayan languages the name is *kayu-manis*, which simply means "sweet wood," but it is the cassia of China that is chiefly employed by the Malays and Javanese as a condiment, and to distinguish it from the native spices of the same genus, the word China is added, making "sweet wood of China." The Persian language has followed the Hindi, giving cinnamon the name of *darchini*, or "Chinese wood." In Arabic I find three different names for cinnamon or cassia, *armal*, *armak*, and *karfah*.

To no Oriental name of Indian, Persian, or Arabic can the Greek name for cinnamon, *kinnamon*, or that for cassia, *kasia*, be traced. These are, however, the obvious origin of the Latin words, *cinnamomum* and *casia*, the source of several of the names which they bear in the languages of modern Europe, such as the *cinnamone* and *ciname* of the French, and our own name taken from them. The word *canella*, signifying a little pipe

or tube, first probably used by the Venetians, through whose hands the spice trade of the middle ages passed, has been substituted for the original Latin name, in Italian, in French, and in Spanish.

The consumption of cinnamon and cassia in Western Asia and Europe is immemorial, or at least of a very remote antiquity. Thus, if they were really the substances mentioned in the Book of Exodus under those names as rendered in our translations, their use among the Jews will carry us back to a time estimated to be 1,500 years before the birth of Christ. If, at the time thus alluded to, the Jews were acquainted with these two spices, it is natural to conclude that their acquaintance with them must have been derived from the Egyptians, under whom they had been living for several centuries; but I am not aware that either cinnamon or cassia has ever been found in ancient Egyptian tombs, although ears of wheat and barley certainly have. When mentioned in Exodus, it is as ingredients in the composition of a holy oil, in combination with myrrh, calamus, and olive oil. The quantity of cinnamon named is 250 shekels, but of the cassia double that amount, implying, I presume, the inferior quality of the latter. Reckoning the shekel at 220 grains weight, the whole quantity of the cinnamon in the composition would amount to no more than about eleven and a-half ounces, an estimate which would show that cinnamon was at the time referred to a rare commodity in Judea. It is shown in Ezekiel that Tyre was the market from which the Jews derived their supplies of cinnamon and cassia.

The Romans were familiar with cinnamon and cassia even before the Christian era, and the Greeks much earlier, since cinnamon is mentioned by Herodotus, and both people most probably received these commodities through the same channel as the Jews. Pliny's account of them towards the end of the first century is very imperfect and unsatisfactory, and it is obvious that he knew little more about them than as they appeared in the market of Rome. He says that both cinnamon and cassia grew in neighbouring lands, and he makes their native countries Ethiopia and Abyssinia, which we now well know do not produce even a single species of the genus to which they belong. Of cassia, he says, that no article varied so greatly in price, and he quotes it at from five to fifty drachmæ the Roman pound, that is from four shillings and sixpence to forty-five shillings the pound avoirdupoise. The price of the best cassia in the London market just now is about one shilling a pound, and of the finest cinnamon about three shillings, so that our best cassia costs but one forty-fifth part that

of the best Roman, while the best Roman was fifteen times the price of our best cinnamon: both articles must, therefore, have been with the Romans the mere luxuries of the exorbitantly rich.

But what were the countries and by what routes were cinnamon and cassia furnished to the ancient nations of Western Asia and Europe in remote times? There are at present but four countries which produce these two articles for the purposes of commerce, Ceylon, Cochin China, China, and Japan. Continental India furnishes none, but is itself supplied from China. Cochin China furnishes China only, and Japan is out of the question, for, in the times referred to, there was no more intercourse with it than there was with America. With respect to the cinnamon of Ceylon, its commercial history has been carefully inquired into by Sir Emmerson Tennent, in his elaborate and instructive work, and the result of his inquiry is very remarkable. He had examined Oriental and European authorities, ranging over thirteen centuries, and he finds that Ceylon is never mentioned as a place producing cinnamon down to the end of the thirteenth century. On the arrival of the Portuguese, however, Ceylon was producing cinnamon, its existence having been probably brought to notice through the trade which the Arabs and Persians were carrying on with Ceylon and the Islands of the Malay Archipelago in the twelfth and thirteenth centuries. The Portuguese, when they arrived in the country, found cinnamon to be the mere precarious produce of the forest, and so it continued to be during their own and their successors' occupation of the island, down to so recent a time as the year 1770, when the Dutch made the first plantations of it. By whom the bark was first freed from its epidermis and packed in the neat manner now practised, is not known, but it was probably by the Portuguese; for it is not likely to have originated with the Singalese, or even with the immigrant Hindus, who are ever careless and slovenly in all such matters. Even the fine cinnamon of Cochin China, intended for the Chinese market, is still exported, with its epidermis, as if it were no better than oak bark, as I had myself an opportunity of seeing when in that country.

It might, indeed, be naturally supposed that the cinnamon of Ceylon would, in the course of a native coasting trade, be conveyed to the emporia of the west coast of India frequented by the Greek traders of Egypt, and through them found its way to Western Asia and Europe. In the enumeration of commodities found at these emporia, in the celebrated *Periplus of the Erythrean Sea,* neither cinnamon nor cassia are mentioned; while the malabathrum of India (*Cinnamomum albiflorum*),

the tortoiseshell of the Laccadive Islands, and even the pearls of Ceylon itself, are named. The cinnamon and cassia, therefore, which found their way from the East to Tyre, to Alexandria, and to Rome, were not the productions of Ceylon or of any part of India. There was but one country which could have furnished them, and that was China, which even at the present day furnishes all the countries lying west of it with the greater part of their supply. If such were the case, the article would be conveyed by the same overland route by which the raw silk of the same country was supplied to the Western World at a later period. It is true that China produces only cassia, but the distinction between it and cinnamon made by the modern nations of Europe is, even now, unknown to all the nations of Asia, who distinguish the article only by its intrinsic qualities. Most probably, indeed, the Roman cinnamon and cassia were the productions of the same plant, the cinnamon being the bark of the young plant, and the cassia that of the old, the first, as is well known, abounding in essential oil, and the last deficient in it. It may be, too, that the cinnamon was more carefully preserved or cured for the market, presenting, on that account, a different appearance. This view seems to be strengthened by the variety which existed in the quality of cassia, as quoted by Pliny, the best being of ten times the value of the worst.

With respect to the cinnamon of Ceylon, there are some opinions expressed by Sir Emmerson Tennent, with which I can by no means agree. He fancies that the plant is not indigenous in Ceylon, a notion which is contradicted by the Superintendent of the Royal Botanical Garden of the Island, quoted by himself, who testifies to having seen it growing wild, even at the height of three thousand feet above the sea-level; although there, as might be expected, of an inferior quality, since the plant is known to attain the highest perfection in low sandy plains almost on a level with the sea. All scientific botanists, indeed, now agree that the cinnamon of Ceylon is a distinct species from all others and peculiar to that island.

Notwithstanding those facts, Sir Emmerson comes to the conclusion that the cinnamon of Ceylon is an exotic, and introduced by the Arabs from Africa. Had it been an exotic, it would have been found a cultivated plant on the arrival of the Portuguese; but we have seen that it was then the mere wild product of the forest, and so continued to be down to a time short of a century ago, when the first attempt at its cultivation was made. Still more untenable is the notion that the plant was introduced from Africa, for Africa produces not a single species of the genus to which cinnamon belongs, and but a single species

of its natural family the laurels. For this fact I have the written testimony of my friend the late Dr. Royle, and by personal communication that of my able, acute, and accomplished friend the late Dr. Hugh Falconer. As to the parties supposed to have introduced the cinnamon plant into Ceylon, the Arabs and Persians, I need only observe that, with the exception of the opium poppy, which, on account of its climate, does not, and cannot be effectually cultivated in Ceylon, these people never introduced a single staple even into Continental India, and none at all into Ceylon, or into anyone of the islands of the Malay Archipelago, although they had settled in some of these countries and imposed their religion on many of their inhabitants three whole centuries before the arrival of Europeans. Even their own coffee they did not introduce, but left this to be done in after times by the Dutch in the Malay Islands, by the Spaniards in the Philippines, and by the English in Ceylon, only forty years ago. The Arabs propagated nothing but religion, and that, too, of a very ambiguous quality.

The cinnamon plant of Ceylon has in our own times been cultivated in several parts of Southern India, and the produce has already been exported in considerable quantity, so as to be already a recognised article in the European markets. It has also been cultivated in Java of late years; but in the different soil and climate of that island, its culture cannot be expected to succeed. The produce of our own Indian Continental possessions is of inferior quality to that of Ceylon, the latter exceeding it in value by full seventy per cent. Cinnamon, indeed, like the clove and nutmeg, seems to attain perfection only in its native locality. I will add that from its very nature, however cheaply produced, it must always be an expensive luxury of limited consumption, and, therefore, not entitled to any special encouragement as an agricultural or commercial object.

The cardamom is a spice long known, and in some countries largely used as a condiment. Plants of several genera, and of several species of the same genus pass in commerce under this name. The best known and most esteemed cardamoms are the fruit of a plant of the mountains of Malabar, which is called by botanists *amomum repens* and more recently *elettaria cardamomum*. The eastern parts of Bengal produce another cardamom larger but inferior, which is the fruit of the *amomum aromaticum*. Sumatra produces a third sort, the product of *amomum cardamomum;* and Java a fourth, that of *amomum villosum*. The western coasts of Africa and Madagascar produce several inferior sorts of cardamom.

The celebrated oriental botanist, Roxburgh, states that the cardamom of Malabar is the spontaneous product of the forest,

and incapable of cultivation, and I believe the same to be the case with most of the other kinds. The cardamom of Java, however, is an exception, for it is found both wild and cultivated. The names for the cardamom, as might be expected, are, at least, as various as the countries producing it. In Sanskrit and Hindi the name is *ilachi.* In the Canarese, which is the language of the native country of the Malabar cardamom, the name is *ailam,* of which the Tamil *yellam* is, no doubt, a slight corruption. In Persian the cardamom is called *shusamir,* and in Arabic *kalula,* names not traceable to any Hindu tongue, although India is now, and probably always has been, the country from which the Persians and Arabs has been supplied with cardamoms, of which they are large consumers. In Malay and Javanese we have two names, *puwar* and *kapulaga,* which are probably those of two distinct species.

The name of the cardamom in Greek is *kardamomon,* and, borrowed by the Latin as *cardamomum,* is the source of the name which it bears in all the modern languages of Europe. But the Greek name itself is of unknown origin, and certainly not traceable to any oriental language. The cardamom, however, was as an article of commerce known to the Greeks and Romans; and Pliny quotes the price of cardamoms in the market of Rome in his time at a price equivalent to eleven shillings and sixpence the pound of our ordinary commercial weight. The Persians, Arabs, and Turks receive their present supplies from the ports of the Malabar coast, and this was most probably the quarter from which the Romans derived them in the time of Pliny. Yet cardamoms are not mentioned in the list of articles found at the Malabar ports in the *Periplus of the Erythrean Sea,* which, however, might arise from their not being considered a staple article of trade: neither are they named in the far more extensive and satisfactory list of the Portuguese traveller Barbosa, who visited India in the first years of the sixteenth century.

The root of the ginger plant, the *Amomum zingiber,* is one of the most extensively used condiments, ranking, in this respect, next to black pepper. We may estimate the general consumption by our own, which at present amounts to 2,300,000 lbs. It owes this extensive diffusion to its cheapness. The native country of ginger would seem to be tropical and subtropical India and China, from the equator to the twenty-sixth degree of N. latitude, while it is found in the Himalaya mountains at an elevation of from four thousand to five thousand feet above the sea-level. Within these wide bounds, ginger is the product of many different countries, and this is attested by the many different names which it bears. In Sanskrit the name given to it is

sringavera; in Hindi, *ada* and *adrak,* and for the prepared root *sonth.* In Malay its ordinary name is *alia,* but it is frequently known by a metaphorical one, namely, *sápâdas,* signifying "the pungent." In Javanese we have it as *saï;* in the principal language of Celebes, as *leyd;* in the language of Ternati, as *wovaka;* in that of Tidor, as *gora;* in that of Amboyna, as *sirve;* and in that of Banda, as *soi,* which last, however, comes from the Javanese.

In Persian the name for ginger in *shangviz,* and in Arabic *zangibil,* neither of which words can, by any rule laid down by modern philologists, be traced to the Sanskrit word *sringavera;* yet, when we consider the vast variety which exists in the pronunciation of the different races of man, and the ignorance and carelessness of the parties who borrowed words from foreign languages, it is not at all improbable that both the Persian and Arabic word may be corruptions of the Sanskrit.

The Greek name *zingiberis* sounds very like a corruption of the Arabic, and from it comes the Latin *zingiber.* From the Latin comes the Italian *zenzero,* the Spanish *gengibré* and *agengibré,* the French *gingembre,* and the English *ginger.*

Ginger, an Asiatic production, has been carried to America and to Africa, and been cultivated in the tropical parts of both. We may in a good measure judge of the most suitable country for its production by the value set on the different kinds as they present themselves in the markets of Europe. Malabar, tried by this test, appears to be the most suitable climate for it. When a hundredweight of the best Malabar ginger is worth in the London market 135*s.*, that of other parts of India is worth no more than 62*s.*, while the ginger of Africa is worth but 45*s.* The great probability is that it was the ginger of Malabar that found its way to Greece and Rome through the commerce which was carried on between Egypt and the western coast of India.

There is another aromatic condiment which it may be worth while mentioning, not so much on account of its own importance as to show how much of sheer accident and empiricism may exist in the dissemination of plants. This is the cubeb pepper, the *Piper cubeba* of botanists. As far as I know, this species of pepper is a native of the island of Java only, or, at least, it is there alone that it is cultivated. In Javanese it is called *kamukus,* sometimes pronounced *timukus,* evidently a native word; the Malays call it *lada-bârckor,* which signifies "tailed-pepper," from the foot stalk always adhering to the corn when the article is prepared for use. By some chance or other the cubeb has found its way into the markets of Continental India, and it is known to the Hindus under the name of *kabab*

Chini. What the word *kabab* means in this case has not been explained, but the epithet *Chini* or *Chinese* simply implies, as it does with some other commodities already referred to, that the article comes from some foreign country lying east of Hindustan. The Indian name is the source of the word "cubeb" adopted by all the European nations.

In its native country the cubeb pepper is used only as a condiment. It is so used likewise by the Hindus, but by them also as a remedy in diseases of the mucous membranes. During our temporary occupation of Java the Indian servant of an English officer insisted with his master on its efficacy in this last respect. The officer named it to the medical officer of his corps. It was tried, and its efficacy ascertained. This was in 1816, and in the following year it was brought to England, and used for the same purpose. It is still put to the same use by all the European nations, and our own imports of an article before unknown, except to botanists, amounts to one hundred and fifty thousand pounds weight yearly.

But of all vegetable condiments, the most important, because that of most general use, is the capsicum, or red pepper. The genus, which belongs to the same natural family as the *solanums*, comprises a score of spices, all possessing more or less of the same qualities of pungency and flavour. It is of universal use, and amounts almost to a necessary of life in every tropical or sub-tropical country of Asia, Africa, and America. This universality of use it owes to its agreeable quality, its hardihood, and its consequent cheapness, which makes it accessible to the humblest classes.

There is reason, I think, for believing that one species or other of the capsicum, for there are several, is indigenous in Asia, Africa, and America. Yet in Africa it might seem to be an exotic, to judge by a fact mentioned by Sir Samuel Baker, that, although the Arab settlers use it freely, it is rejected by the Negroes, under the belief that it produces barrenness. It seems, however, to have been early known to the people of Madagascar, for I recognise it in their language by its Malayan name slightly corrupted.

The capsicum was wholly unknown to the Greeks, but this might have been the case whether the plant was exclusively Asiatic or exclusively African or American. In every country of tropical Asia the capsicum of one species or another is of universal culture, and has been so immemorially. A notion has, notwithstanding, been entertained by some distinguished botanists, that the plant is an exotic, in Asia and Africa, and introduced from America. This was the opinion of so great a botanist as Robert Brown, but I am satisfied that it is a mistake.

The hypothesis of an exclusive American origin of the plant is founded on the supposed absence of any specific name for it in the Asiatic languages. It is a frequent practice of the oriental languages to give a generic name to a whole family of plants, and distinguishing the kinds which come under it by characteristic epithets. This has been done in the case of all the plants having the general properties of black pepper; but the practice is not general, and there are many exceptions. In the Sanskrit and vernacular tongues of Northern India the generic name is *maricha*, and to distinguish the species we have, as in the languages of Europe, added to it the epithets "round" and "long," and for the capsicum "red" pepper. The same practice obtains in the Malay language, in which the generic term is *lada*, followed by the same epithets of round, long, and red, with "tailed" for the cubebs. In the Javanese, on the contrary, we have special names for the different kinds. Thus the generic name for the pepper in the Sanskrit becomes in the Javanese the specific name for black pepper; *kumukus* is that for the cubeb, and the capsicum has two special names, *lombok* and *chabé*. Mr. Brown founds his opinion of the American origin of the capsicum on the belief that the name chili, said to belong to the Aztec or Mexican, is applied by the Malays to the generic term. This, however is a mistake, for this word is wholly unknown to the Malay language.

XVII.—*On the Free Indian Tribes of Central America.* By Frederick Boyle, F.R.G.S.

IND

[*Read June 11th*, 1867.]

There are few persons in Europe, excepting such as have made Central America a special study, who have any definite knowledge of the present condition of its Indian races. Some, I find, have a curiously vague idea that the Spaniards utterly destroyed the native population; others, that intermarriage, debauchery, and other plagues, which, as we are mysteriously told, invariably afflict a lower grade of human beings when confronted with the higher, have long since exterminated the pure Indian stock; others again, of superior information, believe that the aboriginal races were all reduced by their invaders, and remain as a docile working class unto this day. The latter impression is certainly true of three-fourths of them, or, at least, was so until ceaseless contests between whites and mestisos taught the coloured peon his overwhelming power, and here or there aroused his ambition and long latent ferocity. Of these "Indios manzos," or tame Indians, I do not design to speak; though very numerous in Guatemala, Honduras, and Nicaragua, they are, as yet, of little account politically, and the outbursts of their fury have not hitherto been followed by any definite assumption of power. Even Rafael Carrera, though for twenty years President and Dictator of Guatemala, governed by the hands of whites or mestisos; nor did the Indian "peons," who had raised their kinsman to power, ever attempt to claim authority in the republic.

But in the nominal territory of the five states are many districts of various extent which have now no regard whatever for the white authority. Of some of these the inhabitants seem never to have been brought into contact with the Spanish power, and are to this day ignorant or careless of the white man's presence; such are the Menchés in Guatemala, a few tribes of Northern Mosquito, and the Pranzos or Guatusos of Costa Rica. Other races there are, probably more numerous, which resumed their independence after a period of subjection more or less prolonged. Among these may be noted the famous Indians of Darien and of Santa Catarina, visited by Scherzer and Von Tempsky. Beginning at Panama and travelling northward, I will very briefly enumerate the various tribes now absolutely or practically independent.

First in order come the Indians of the isthmus, Darien, San Blas, and Mandinga, upon whom Dr. Cullen read an interesting paper last month to this Society. That gentleman asserts that the invaders never overcame these tribes, and, although this fact seems doubtful to me, it is certain that at this day they regard Spaniards with the bitterest hatred. To English and Americans they are not quite so hostile, but everyone must remember the disastrous explorations of Com. Prevost, R.N., and Lieutenant Strain of the United States Navy, in this territory.

Northward of these, in the tract disputed by New Granada and Costa Rica,—every boundary of Central America is a *casus belli* ever present,—lie the Talamancas, who extend as far as the bay of Matina. These Indians are said to be numerous, and the people of Costa Rica declare them to be allied in race with the Guatusos; but they are not nearly so ferocious. As I was told in San José, it is no unusual event for an adventurous young trader to lead a mule or two into their country, where, if he be not murdered, he will make an enormous profit. The Talamancas live as agriculturists, and are in no way dangerous if not disturbed.

Northward of these again are the far-famed Guatusos or Pranzos, who inhabit a territory lying between the Merivales mountains on the west, the lake of Nicaragua and the San Juan river on the north, the Atlantic shore on the east, and the table land of San José upon the south. Of this tribe I shall speak more at length.

Across the San Juan river, in the republic of Nicaragua, and the reservation of Mosquito, are very numerous tribes, Woolwas, Moscas, Ramas, Poyas, Towkas, Xicaques, and Caribs. The population of these tribes is quite unknown, estimates varying from 8,000 to 25,000. They seem all to be quite savage, although practising many of the virtues belonging to a more civilised existence, such as cleanliness, and industry, and chastity. It is probable that they have neither advanced nor fallen back in their condition since the time of the conquest, but, on the other hand, it must be owned that the Moscas have degenerated vastly in that martial spirit which so frequently routed the valour of the Spaniards.

To the north-west of Nicaragua lies San Salvador, which alone of Central American States has no hostile population of Indians. "There is, nevertheless," says Mr. Squier, "a portion of this state where the aborigines have always maintained an almost complete isolation, and where they still retain their original manners, and, to a great extent, their ancient rites and ceremonies." This district is known as the Costa del Balsimo

or Balsam Coast. It is about fifty miles long by twenty-five broad, lying between La Libertad, the port of San Salvador, and the roadstead of Acajutla, near Sonsonate. This district is entirely occupied by Indians, retaining habits but little changed from what they were at the time of the conquest. It is only traversed by footpaths, so intricate and difficult as to baffle the efforts of the stranger to penetrate its recesses. The difficulty of intercourse is enhanced, if not by the actual hostility of the natives, by their dislike to any intrusion on the part of the whites, be they Spaniards or foreigners." These people are called Nahuals, and are thought, with some probability, to be Aztec in origin, and allied to the Niquirans of Nicaragua.

Northward of San Salvador, and stretching from sea to sea, lies Guatemala, the most powerful of the five republics. Its nominal territory is vastly curtailed by Indian tribes partly or wholly ignoring the central authority. The most powerful of those which have never been subdued, are the Menches, inhabiting the north-eastern corner of the state. So spirited and hostile are these people, that in 1837 the then government of Central America found it necessary to make a league of friendship with their cacique; in this document all pretension of authority over them was yielded,—which was, indeed, no great privation to the whites, seeing that not one had ever ventured into their territory. Also, certain stipulations were made providing the free passage of missionaries "to instruct the young Indians in civilised knowledge," but such have been the disturbances of the republic that no effort has been made to profit by this permit,—which is probably fortunate for the missionaries, and not quite unlucky for the Menches.

Of another race of Indians, virtually free, and most jealous of strangers, Von Tempsky gives an interesting account in "Mitla." They live almost due north of Quesaltenango, and their numbers are estimated at 24,000 souls. Except in that they have adopted a drunken parody of Christianity, with which they relieve the monotony of human sacrifice, these people, said to be Quiché by race, preserve all the customs of their forefathers before the Spanish conquest. I may add, that those customs, with the exception of the sacrifices aforesaid, seem to be quite as civilised, much more decent, and infinitely more orderly, than those of the surrounding Christians.

In the north of Vera Paz, to the west of Peten, and all along the Usumacinta, dwell numerous and warlike tribes, called generally Lacandones. They are of one stock with the Menches, of whom I have before spoken. It is of course quite impossible to estimate the power of these races, their civilisation, or customs, but I may observe, that all Guatemalans agree in assigning

100,000 souls to the Menche race alone; and not a few have assured me that the Lacandones generally are more numerous than all the remaining population of the republic. This would give them something like 900,000 souls, but it is mere guess-work and tradition. That they are very numerous is beyond doubt, for until the middle of the last century they kept the whole northern part of Guatemala in continual terror by their fierce incursions. Certainly the Lacandones and their country, so mysterious and romantic, offer one of the most interesting subjects of exploration left in the world. Whether or no we believe in the Itzimaya, the great city of golden mystery, we must at least feel a thrill of excitement in reflecting that a territory exists in which such a romance is possible. That the Itzis or Lacandones were very highly civilised only one hundred and fifty years ago, we are assured by the report of Mazariegos, who captured their island city of Flores, in 1695. Valenzuela, who accompanied the invading forces, and took part in their barbarous destruction of palaces and temples, tells us that the Indian buildings were far handsomer and more solidly built than those of Guatemala. Fleeing from Peten into the wilderness, the Lacandones disappeared from view, and it may be they raised again in Vera Paz the stately edifices which Spanish vandals had destroyed. Waldeck observes, that certain of these Indians whom he met were dressed in the precise fashion of the Palenque monuments. Any gentleman who has seen a picture of those monuments will readily believe that they cut a peculiarly curious figure.

Into Mexico proper I do not design to enter.

In the eastern and northern parts of Honduras, the departments of Yoro and Olancho, are several "bravo" tribes—Payas, Secos, Xicaques, and Caribs; none of these have ever been conquered except the latter, who, as everyone knews, were deported from St. Vincent by the English. The most noticeable peculiarity known of these Indians is their custom of living all together in one house, like the Dyaks of Borneo. Each family has an apartment of its own. They are peaceful, industrious, and remarkably cleanly. Under ordinary circumstances, they are friendly with the white population, but they absolutely decline to submit to the authority of the republic.

Of Yucatan I have not been able to obtain any reliable information. Stephens observes, that there *may be* "bravo" Indians in the interior, of which very little is known, but he does not assert that he was absolutely so informed. If this be so, we should expect to find them in a condition much more advanced than the other unconquered tribes, excepting the Lacandones, for the Mayas of Yucatan were, and still are,

very superior in intellgence to the other Indians of Central America.

Of all these independent tribes the Guatusos, or as they are called by the Caribs, Pranzos, should be in some respects most interesting to the English traveller. The broad San Juan river, which now, subject to protest, forms the boundary between Nicaragua and Costa Rica, has two large tributaries descending from the Merivalles mountains and the San José table land. The most easterly is the Serebpiqui, and next to it the San Carlos. Both these streams are rocky and dangerous, full of rapids, and subject to sudden floods; little adapted, in fact, for traffic purposes. But there is a third river, larger than the eastern streams, which falls directly into the lake of Nicaragua, almost at the point in which the San Juan flows out of it. So far as has been explored, it is a slow, deep stream, much blocked with fallen timber, but in other respects suited for navigation. This is the Frio, or Cold River, and its waters are, indeed, sensibly cooler than those of the lake. Where this river rises, what its course, or the dangers of its navigation, no man knows; one fact alone is assured about the Frio,—that its headwaters are the favourite haunt of the Guatusos. The growing commerce of San José has striven hard for an outlet on the Atlantic shore, and bold woodsmen have, at various times, cut a mule track to the Serebpiqui and San Carlos; but the dangers of these streams are too great for commerce. The Rio Frio is the outlet provided by nature for the produce of San José coffee grounds; but nature provides for all her children alike, and she has posted the Guatuso family upon this San José canal.*

Everything connected with these fierce Indians is shrouded in mystery, but curiously enough all accounts agree in giving them an origin far from their present seats. The story current among Costa Ricans is especially interesting to us, even though we be ever so doubtful of its truth. When Sir Francis Drake, say they, retired to the Pacific shore, after the sack of Esparsa, a large body of his men mutinied, in mad hopes of holding that town against the Creole forces, and colonising it. Drake left them to their fate. The Spanish army assembled with all speed, and the mutineers were only aroused on finding themselves nearly surrounded. Hastily escaping, they took a route through the Merivalles mountains, with an intention of cutting

* I may mention in passing, that Nicaragua also lays claim to the Frio territory, and apparently with some reason; but Costa Rica, strong in her coffee and her mountains, treats these rights with contempt. It is scarcely necessary to add that neither government seems very anxious to make close acquaintance with the subjects whose possession they dispute.

their way to the friendly Mosquito shore. Unquestionably this route would lead them through the country of the modern Guatusos, then, we are told, called Pranzos. It is certain that the Buccaneers never crossed the San Juan, and equally certain that the Spaniards never fell in with them. Many in Costa Rica believe that, wearied out with hardships, they came to rest around the head waters of the Frio, where they destroyed the male population and took the women to wife. The universal legend of surrounding people, Indians, Caribs, Nicaraguans, and Costa Ricans, declares the Guatuso race to be distinguished by red or fair hair, and blue eyes,—whence their new name "Guatuso" or red rabbit. Another fact is asserted of them—that they speak English,—but that is said, and with some truth, of every "bravo" tribe round Mosquito. It is not a little curious, that in the various fights of invading expeditions, no Indian has been seen in daylight, except upon one occasion; the arrow is discharged from an unseen archer, the celt strikes silently from behind. The single exception to this rule was in an expedition made by Captain Parker, of Greytown, in 1863. He asserts that an Indian shot by him upon the Frio on that occasion, showed precisely the colour and type of a Texan Comanche. Mr. Froebel also gives a romantic story of a young German who fell into the hands of the Guatusos—he was tied to a tree, and the usual incidents took place,—chief's daughter—touching speech—marriage and escape, and so on; but the hero, who is now happily established at San Francisco, says nothing about this white complexion.

Such is the Costa Rican tradition, which is so strongly accredited there, that an European minister, forgetful of chronology, fervently prayed us to carry an Union Jack in front of our exploring party. Another story referring to the same event, describes the fugitives as tame Indians, who took advantage of the buccaneer disturbances to make their escape over the mountains. In Nicaragua various stories, more or less curious, are current; some assert, that in a grand foray the Guatusos, who came from Mosquito, carried off thousands of Spanish women, whereby the national complexion was changed. In reference to this theory, one must needs inquire where on earth the women came from? All Nicaragua would scarcely have given tens for the thousands needed. Others believe the Guatusos to be descended from the old inhabitants of Zapatero, who fled from that island in a single night, scared by the practice of Christianity as shown by missionary padres. Possibly there is truth in all these stories, and the population of the Rio Frio is made up from the bravest fragments of many surrounding tribes.

In regard to their condition, nothing whatever is reliably known. Padre Zepeda, a Jesuit, declared in 1750, that he lived many months among them and was kindly entertained. He speaks of towns, and houses, and gardens. The latter point is certainly curious, if the Padre really meant to describe a garden as we understand the word. His report caused several missionary expeditions to be despatched up the Frio, and over the mountains, but the Guatusos were found to be just as ready to despatch missionaries as the most zealous bishop could be. And so the attempts were gradually abandoned, with no further success than the addition of several martyrs to the calendar; nevertheless, some of these parties approached the Indian territory so as to see towns and immense fields under cultivation.

Independently of romance, the exploration of the Rio Frio is of great importance to civilisation. The richest specimens of gold quartz I ever saw came from this district, and the weirdly fame of these Indians, who act as dragons watching treasure, alone deters a swarm of adventurous diggers from hastening thither. Lying as it does between the San Juan river, the Atlantic, and the coffee grounds of Costa Rica, it is evident that if a railroad or canal should ever be carried across Nicaragua, a branch line, or at least a solid road, must be constructed along the banks of the Frio to convey the growing commerce of San José. Sooner or later then the Guatusos must be disturbed, for it would be preposterous to retain the present trade route by Punt 'Arenas, Panama, or the Horn, if any lasting transit scheme were opened in Nicaragua. Such a branch line would revolutionise the whole trade of Costa Rica, which has now no communication with the Atlantic coast.

Two serious attempts have been made in modern times to explore this territory; both failed from a want of caution almost inconceivable to one unacquainted with the Creole mind. The earliest, in 1849, consisted of fifty soldiers, under the guidance of Don Trinidad Salazar, Commandante of San Carlos. This party was utterly overwhelmed by unseen enemies, and three alone regained the mouth of the river. The second attempt was made from Costa Rica by land, and this likewise was routed with enormous loss. Beside these two large expeditions, Captain Parker of Greytown, accompanied by three Frenchmen, ascended the river in 1863. On the sixth day they fell in with a tall savage, who was spearing fish. Him they shot in self-defence, but so ferociously dauntless was his bearing when thus suddenly confronted by four armed monsters,—as white men must have seemed to him,—that Captain Parker and his party unanimously determined to risk no more encounters, and returned precipitately.

I have referred to certain specimens of gold ore in the possession of Colonel Don Juan Estrada, in San José de Costa Rica. These fragments were obtained in a very romantic manner. At the time of the filibuster war, Colonel Cauty, an Englishman in the service of Costa Rica, was placed in command of Castillo Viejo on the San Juan river. Two of his men, preferring to face the evils they knew not of, deserted from that fort, and plunged into the Frio forests. Two months afterwards they made their appearance in San José, where they were recognised, and placed in separate confinement. Such scientific men as Costa Rica can boast examined them again and again in reference to their route, seeing they must necessarily have traversed the Guatuso country. They told a curious story of adventure,—how they journeyed by night through Indian roads, and over numerous streams, passing several large villages or towns, surrounded by earthen walls, over which roofs and standard poles were visible in the moonlight. Among other wonders, they asserted that all the streams of this district flowed over beds of gold, and in confirmation produced the specimens alluded to, which are certainly most singularly rich. Their account created great excitement, as was natural, among a gambling population, but no further effort was made after the massacre of the Costa Rican party, to which I have already referred.

For it must be recollected that Costa Rica differs from the other republics in possessing a very large trade, and a very small mingling of races. The old Spanish blood in that republic is not in a minority so small as to be almost invisible, but on the contrary, numbers two-thirds of the population. The people are orderly, industrious, and fairly brave, while pauperism is almost unknown among them. The class, therefore, from which "prospecting" expeditions are recruited is absent here, and all the leading men in the country most strenuously oppose the weakly efforts made from time to time to explore the El Dorado of Central America. They fear, and with reason, that, to put other possibilities aside, if the fertile Atlantic plain were opened to colonisation, the peons of the coffee grounds would move thither in a body, and squat, each on his own little farm. The hostility of the coffee aristocracy must always therefore be expected in any attempt to explore those regions.

I had hoped to be at this moment in America on my way to the interesting territory I have described. It was our intention, could we raise volunteers enough, to force our way from San José de Costa Rica to the Rio Frio, thence to the Blewfields river to examine some most curious ruins lately found there,

and thence across the continent to Guatemala on further exploration. Men and money, however, both failed us for an enterprise so serious and so costly, and the spring season for travel in Guanacaste is lost for this year. May we be more fortunate in the autumn! But I greatly fear that the geography, ethnology, and antiquities of savage America will never be thoroughly known, until the Yankees take possession of that beautiful country,—an event for which all travellers should most devoutly pray!

XVIII.—*On the Ethnology of the French Exhibition, as represented by National Arts.* By Mrs. Lynn Linton.

[*Read June 25th*, 1867.]

Many people decry the present French Exhibition as not only a nuisance to all concerned, but as useless in itself—as nothing but a huge and undeniably very ugly bazaar, where are merely gathered under one roof selected specimens of things to have been seen and bought on the Boulevards or in Regent-street any time these ten years. But whether this is so or not, apart from all question of commercial value or of social gain, the Exhibition has, at least, one feature of undoubted importance, namely, its ethnological material, which is singularly rich both in amount and suggestiveness. Scattered throughout the building are examples of almost every condition of human life, from the rude works of the savage, whose finest ideas of art are embodied in a necklace of shells, a mask of tattoo, or a temple of skulls, through the intermediate grades of the semi-civilised making their first awkward efforts after an intellectual life, up to the latest productions of European skill, and the grandest combinations of human power and material forces which the world has yet seen. The Exhibition of the Champ de Mars has them all; and, either in life or in effigy, by natural productions or by individual workmanship, types of the large family of man are placed before us, claiming our pity for their degradation on the one side, or challenging our respect for their advancement on the other.

One of the most interesting parts of the Exhibition is the Archæological Gallery, which leads us by successive stages from the primitive conditions of the lake-dwellers to the complex life of modern times. Stone celts, a few bone implements, bits of battered metal, fragments of coarse pottery and of textile fabric, a little good work in gold (one gold ring, a fine six-rayed star, showing much taste and skill), the jaw of a bos-bison, and a few seeds of grain, give us slight indications of the time when men were fighting hand to hand with nature, and conquering from her little more than the leave to live. After these we have leaf-shaped bronze swords, iron rings, glass vases, and fragments more or less complete of large earthenware vessels, with other of the ordinary remains of the Roman period. From them we pass to examples of early Christian art; to grand mediæval missals, with their patient work and

gorgeous illuminations; to crystal crosses enclosing mysterious relics venerated then, and now by some, as the actual presence of the Divine; to carved ivory sacramental cups and triptychs, crucifixes and crosiers; to pastoral staffs of fine gold encrusted with precious stones; to exquisitely wrought fonts, and sacred vestments heavy with rich embroidery; to fragments of lovely stone-work brought from distant cathedrals—all eloquent of the days when the ecclesiastical was the only intellectual life, and when the progress of humanity was represented by the vitality of the religious idea. Thence we pass into a more secular atmosphere, losing more and more of Christian impress as we proceed, but not yet losing conscientiousness in manner of work, nor artistic seriousness—not yet becoming frivolous or debased, and still retaining the echo of that graver piety which hitherto had been the prime motive of social life. This is the period of the most beautiful work in bronze and stone—not for churches, and not biblical in subject, but for kings and either heathen or historic; for tapestry and majolica; for quaint Palissy ware, with its intense realism and laborious triumph over technical difficulties; for exquisite Limoges enamels; for repoussé work unsurpassed before or since; for carved ivory and elaborate devices; for the deification of art instead of ecclesiasticism, and the greater gain of beauty thereby. After these we come to costly snuff-boxes, enamelled watches, and painted paper fans—the highest efforts of then living skill spent on paper fans for painted cheeks; to Sèvres china of more money-worth than gold; to high-heeled shoes, such as were worn by Madame d'Arblay's princess-shepherdesses; to Daphne and Chloe, and Diana and Hebe, represented by court favourites generous to prodigality; to the universal travesty of Greek art, once the religion of a whole people, but now debased to serve the graceful folly of the Renaissance and the three Louis, when La Pompadour and Du Barry displaced the Virgin and her Saints, and the Grand Monarque was the Gallic Jove, with Versailles for his Olympus and the Maintenon for his Juno. Chapters on the course of French civilisation are written in that small gallery as clearly as if pottery and bronze were open books; and the current of historical life can be traced by the direction of art, almost without a break.

Then, how expressive of ethnological conditions are the special manufactures of various races—the intention, so to speak, of different national workmanship. At first sight it would appear that all gold and silver work would have much the same meaning; that diamonds and emeralds could never be much more than diamonds and emeralds; and that silks and satins, if they answered their final end of clothing the human

body, would have no other function or expression. But seen and compared together, the work of each nation has a distinctive character of its own, evidencing the peculiar habit of thought and intellectual status of the race. If we take the work of east and west, as the two extreme points of the human compass, we can easily see what an immense tract of difference lies between them in mode and object. Nothing can be lower than eastern creative art in some directions—nothing lovelier than eastern artistic manufacture, whether in carved woods, in gold and silver filigree, in inlaid work, in embroidery, or in textile fabrics. We, with all our science, cannot come near the exquisite grace of the unlearned Hindú or the wandering Kurd. Even the Genoese and Maltese gold and silver work is not equal to the Moorish or the Turkish, and indeed owes its chief beauty to the cleverness of its imitation. The east has wrought thus perfectly in its degree for centuries. While we were hacking out dislocated saints and deformed apostles in stone and ivory, the men of the east, working in that unconscious way which seems to go by instinct yet never miss perfection, were weaving their silken threads, carving their sandal-wood caskets, and leading their lines of gold into forms of absolute and unchangeable beauty—beauty not dependent on fluctuating national idea, but eternal as the grace of flowers or the glory of the sunset. And now we have gone forward, and they have stood where they were. When we were prowling about our woods and mountain fastnesses, clothed in skins touched up with woad for the better effect, the Hindùs were manufacturing muslin and printing calico, and the Chinese were inventing silk; but the Hindùs manufacture muslin now by just the same rude means as then, and they print calico as they did from time immemorial, and before Manchester and Mulhouse were; while the Chinese use those great discoveries which almost in our own time have revolutionised Europe, just as they have used them from the beginning, and to as little progressive purpose. The whole world of eastern art is as incomplete in range, if as perfect in special attainment, as it ever was; showing still the same wonderful feeling for line and colour in carved foliage, and silk embroidery, and golden threads, while representing the human form, whether as a nightmare-like god, or an oblique-eyed man, grotesque in its ugliness and childish in its inaccuracy. Meanwhile, our deformed apostles of the mediæval triptych have straightened themselves out into the "Reading Girl," the "Socrates," and the "Last Days of Napoleon"—the masterpieces of the Exhibition; our stone celts and clumsy cross-bows have culminated in rifled cannon and needle-guns; our wooden waggons are transformed to locomotives going sixty miles an hour; the

Great Eastern and the *Henrietta* are our latest versions of the Cantonese junk and the Malay proa; but, with all this, we cannot yet make a Cashmere shawl nor a length of Dacca muslin—we cannot yet cut sandal-wood nor carve ivory like the Chinese, enamel copper like the Japanese, weave carpets like the Kurd, nor twist gold and silver filigree like the Moor. We can do much, but we cannot touch the supreme point of excellence in eastern ornamental work, the seeming product of instinct, tradition, and special culture.

Another point of difference between eastern and western ornamental work is the amount of finish bestowed on unseen and unimportant parts, which is simply a distinction between unconscious beauty and conscious science. Locks, hinges, and the backs and insides of things eastern, are defective or left unfinished; gorgeous cases enclose worthless mechanism; jewels of fabulous worth are set awry, and are neither cut nor polished; gold and silk embroidery is thrown gracefully over dirty linen or unwashed nakedness; but the effect of all is an amount of loveliness to which rule and square have not led us, and probably never will lead us; though, on the other hand, our own sharp, well-ordered work, with its mathematical precision and accurate adjustment, has a beauty in itself by no means despicable although not so picturesque.

Again, the dissimilarity of intention in eastern and western work is as strongly marked as all the rest. There is no national life, no public meaning in anything that comes from the east, and no grandeur of object. We may except, in a degree, Turkey, just awakening to a sense of national needs as apart from dynastic requirements, and sending among her more personal luxuries, arms, mineral productions, cereals, and one or two models. But in general all those gay cloths, embroidered saddles, jewelled scabbards, costly pipes, and wealth of shining vests and scarves, are for the few grand men and their harems: there is nothing for the mass. Thus, it comes about that it is all small and individual work, demanding careful manipulation and costly material rather than elevated idea, and made simply to gratify the taste of the rich. If in that gratification comes the bread of the poor, so much the better; but that would be a result by accident rather than by original intention. The west, on the contrary, sends mechanical improvements, grand scientific discoveries, and specially intricate machinery to lessen the toil of labour and to multiply its products, so that the poor shall profit as well as the rich by the results of science, and the whole platform of society be raised. The meaning of all important western work is the good of the community—not necessarily without reference to the good of the individual projector, but

having for its practical outcome the cheapening or multiplication of some of the essentials of life, the diffusion of knowledge, and the popularisation of better methods of work. Even our western ornamental work is for the most part the product of scientific arrangement, in absolute contrast to the individualised work of the east. We learn the truth of this view in a very small and quite unimportant matter, valuable only as an indication, but as such very valuable. Both west and east send models of their fruits, costume, trades, etc., but the east sends them as toys—mere playthings which may instruct while they amuse, but which are made to amuse and not instruct; while the models of the west are to aid in futherance of science, the final cause of which is public good, not private pleasure. Is not this expressive enough of the different motives in national and industrial life?

These two conditions, then, of progress and stagnation in the method, and of private pleasure and public good as the object of labour, surely express the basic differences between the races which cannot advance beyond a certain limit of growth, and those whose progress seems destined to be arrested only by the boundaries of nature herself—between the nations which are heavily ruled by few, and the masses which do not combine, and those which, being free, are able to coalesce for the general good. Isolation and individuality, segregation and combination are not the same things, and have quite different political meanings.

It is curious to trace the gradual development of intellect, as represented by art, ornament, and manufacture. The savage makes his first essay in picture-making, by painting or tattooing himself in red and blue bands and circles; a row of shells, seeds, or teeth, strung on the midrib of a leaf, are to him what diamond studs and golden chains are to his more advanced brother; a garment of skins of beasts, of curiously woven vegetable fibres, of shells or of leaves, serves for his royal robes of Lyons velvet; and a bunch of ragged feathers prefigures the future imperial crown. After these, he tries his hand at beadwork, like the pouches and mocassins of the North American Indian; or at a little clumsy shell-work, like that sent from the Bahamas, with a certain endeavour after fidelity and beauty just perceptible. Then come more elaborate productions in basket work; then some simple but well-executed carving on pipes, clubs, spears, and paddles; and so by slow but regular gradations we arrive at the stage represented, say, by the Siamese work, standing between barbarism and that amount of artistic development which culminates in Japan and China. The Siamese work has the hideous human forms of the outer bar-

barian, but it has also the wonderful sense of beauty in colour, and the technical dexterity, of the Japanese and Chinese civilisation. It is work which reminds us, as an analogical mental condition, of the first sketch of a noble figure not yet cleared from the brute unhewn marble. Naturally, next to Siam comes the work of China and Japan; careful in method, intelligent of material, marvellous for skill of manipulation; but all small in idea and minute in execution, as would naturally be the work of over-populated countries, where life is parcelled out by inches, where the very forest trees are dwarfed to toy shrubs, where there is no room for anything large to grow, no scope for generous excess, no free space for the riot and affluence of strength. Of the two, the Japanese is the better art, and the more hopeful indication. It is more liberal than the Chinese, the forms are broader, the lines more flowing, the treatment simpler, the reproduction less stereotyped, and there is more play of individual fancy—of itself an important fact—and more freedom of idea. Cabinets and box-lids certainly afford no great opportunity for the display of heroic art; but they are fine of their kind; really grand for box-lids; and attaining about the ultimate limit of class perfection. But, good as they are, they yet show that strange mingling of knowledge and ignorance, of beauty and ugliness, of progress and stagnation, so characteristic of the nation. Broad gold work, cunningly subdued by a dark green ground and artful shading, and representing beautiful forms of birds, is placed next to squat little monsters neither human nor bestial; the most exquisitely tinted silks and satins, adorned with well-executed embroideries of birds and foliage, have also groups of scarlet-faced folks with double-acting vertebræ—if, indeed, it would not be better to say without vertebræ at all; and on the same block of ebony or ivory, carved into an intricate beauty beyond any skill of ours to produce, are faults in perspective, relative proportion, and anatomy, which with us belong only to the first beginnings of creative art. In all this have we not an epitome of the national intellect? Again, in the greater freedom of idea and larger handling of the Japanese, as contrasted with the minuteness and servile conservatism of the Chinese, have we not evidence of the more active vitality of the one nation, and of the more stolid mummification of the other? We may rely upon it, that the genius of a nation makes itself felt in every branch of production, and that even carving in wood is in its degree as true an exponent of mind and character as is literature or social polity.

Within the larger area of ethnological differences in art lies the smaller one of international differences, seen very clearly in

the various European courts, and the direction which the genius of productive art has taken in each. Take the jewels as one small but popular example. There are lovely Italian ornaments of the purest taste, broad and simple though so highly wrought; and there are Palais Royal prettinesses of diamond birds, and golden boas, and green leaves with lady-birds settled on the edge, and drifting flower petals bearing dewdrops in the curve, and childish toys as pins, and charms, and brooches, and buttons; and, to crown all, automatic singing birds, executing a duet of song most creditably for metal windpipes. Then we have the English jewelry, culminating in Lady Dudley's jewels, incomparably the finest in the Exhibition, but owing nothing to their treatment. They are set quite quietly, announcing themselves, and dependent only on intrinsic value. A Frenchman would have isolated the finest, and have massed the smaller into an overwhelming conglomerate of brilliancy. The Englishman simply sets them so as to show themselves in order. Is there no international difference here? Then look at the Austrian and Prussian art manufacture—not art creation, which is another thing. Military in model, precise, square, clean cut—how different it is to the irregular grace, say, of Venetian glass, of Genoese filigree, or of Russian gold-work. It is the art manufacture of highly drilled nations without much generosity of fancy. The Russian work is also intensely characteristic—partly quaint and homely, partly religious and ideal. Golden preserve-pots with silver tops wrought into the likeness of paper covers, and bands of golden bast to keep all snug, samovars, pickle jars, shoes, damask table-napkins on plates of gold, and many other specimens of dull domestic thought, stand by great mosaics representing saintly subjects and wrought with marvellous skill and patience—by wonderful repoussé work—by beautiful cabinets of ebony, enriched with raised flowers in costly stones, and eloquent of Italian influence—by bronzes of the highest style of art—by glass and china of exquisite beauty. Is not this a fair sample of the Russian mind?—homely, devout, a little clumsy, perhaps, but with that compensative longing for Italian art so noticeable, too, in Germany, to act as a counterfoil to its own heaviness? Yet it is from those countries which have these compensative longings that we must look for action, change, and progress. Again, is not that small, simple work executed in common material, which is sent by Switzerland and North Germany, evidently the product of a bad climate, and long winter evenings, and nature in her most austere mood, and lives isolated from the larger world without, and even from the smaller circles within their country? It is individual work; merely imitative

and in no way ideal in a high sense; though expressing the quaint and kindly fancies of a simple and domestic people, and though, in its clock-work, aiming at and attaining a large amount of commercial usefulness: yet, as a rule, it is work done with great patience and by long laborious pains, such as could not possibly come out of the rank forests of the tropics where continuous exertion is an almost superhuman effort, nor out of the sunny plains of Italy, and breathing yet the spirit of Raffaelle, of Cellini, and of Buonarotti. It could only be what it is, unimaginative work that fills up the dark dull hours of home life, without much more mental effort than that needed for patch-work or knitting—an occupation not a creation, dexterous handling rather than artistic method. Every nation thus distinctly expresses itself; but the catalogue would be uninteresting if proceeded with, and enough has been said to show the differences to be discerned by those who care to look for them.

The curious in ethnology may see specimens of every race of man, and of very many tribal subdivisions, in this great international concourse. There is the effigy of a negro from Upper Egypt, escorting ivory, clothed in skins, and adorned with savage finery: a man and a brother by no means pleasant to encounter in lonely places. A live Nubian, in his dark dress, sits smiling patiently by a group of familiar figures, of which he is sometimes taken to be one. The figures are those of a rich fellah with finer features and a more cultivated countenance than has this living poorer brother bound to labour and not to earn; a Nubian woman, pretty in spite of her high cheek-bones, small head, thick lips, and long lean throat; a negress distinctly ugly, but not so ugly as her African sister undiluted; an Abyssinian with a straight face; an Arab merchant with a true Semitic face, the eyes well opened, the nostrils keen and thin, the lips fine and flexible, copper-coloured, but else quite beautiful. And if you stand by that group long enough, stolid Turks and brighter Persians; Algerines with Jewish features; Parsees, small, sleepy, and yet sharp with a feline kind of sharpness; Chinamen, clumsy, flat-faced, heavy, gross; Japanese, more feminine in appearance, and more graceful in movement; Riffs and Moors; Hindus and Negroes; picturesque Albanians like men in an opera or at a fancy ball; Armenians in their long black cloaks, with bushy beards and that nameless air of cultivated intelligence in both look and manner; Arabs from the plains and cities; Roman women with their lustrous eyes and level brows; Venetians golden-haired and of more gentle bearing; Neapolitans in their pretty national dress, and with the sun

upon their bronzed cheeks—all these and more will probably pass by; some staring stolidly as if they did not see what they looked at, and others glancing keenly, critically observing all, but very resolute not to adopt habits to which they are unaccustomed, nor discoveries which would revolutionize them outright.

Passing from the East and South, we get to representatives of the fair-haired north: to the good heavy Bavarian, looking bemused with beer; to the Norwegian girl, frank and innocent, like Faust's unlucky Margaret; and to groups of comely Dalmatian peasants, with their fresh faces and honest ways, making their small efforts after artistic compensation, by the bright colours and elaborate ornamentation of their picturesque dresses. There are effigies of quiet-looking Lapland women too, in summer costume, curiously like some of the Easterns we have just seen, but of a less fleshy kind, the forms smaller and sharper, and the colour lighter—yet the type something the same; and there is a model of a Lapland man in his sledge, done up in furs, and out on his toilsome conflict with winter and starvation. Russia sends a case full of her various peoples, ranging from the North to the South, and from the East to the West—a wide collection enough, showing men of absolutely different types and races, and of distinctly marked ethnological varieties. Tartar faces, Chinese faces, Jewish, Turkish, broad Saxon and sharper Slave, the handsome Georgian and the mean-looking Finn, express some of the varieties of that great amorphous nation, and make us understand a few of the difficulties which must lie in the government, and wonder at the successful annealing, of such heterogeneous materials.

Out of doors, the annexes, architecture, and restaurants offer the same immense national varieties. The forward races fill their allotted spaces with scientific material and the latest mechanical contrivances; while Egypt builds up a model of the Temple of Edfou, with its sphinxes, lotus capitals, and the Eternal Neph upon the architrave. But as repetition invariably vulgarises, the subtle grace of line and harmony of colour of the original is lost in the copy, which, however, does not prevent our feeling the wonderful union of past and present, when we find a modern model of Lesseps' canal and the whole Egyptian country inside the doors which Neph overshadows and the sphinx protects. China sends a small tea-house, where you may have real Chinese tea, apparently only leaves and sugar, handed to you by a flat-faced, mild-mannered maiden, with golden water-

lilies beneath her brocaded dress. Perhaps the curious might find birds'-nest soup, edible dog, sea-slugs or tripang, live crabs, ginseng, and other special celestial food, if they were to try. It would be an experiment worth making, chop-sticks superadded. The grave impassive Turk, sitting in cross-legged dignity within his cool, dark, laticed shop, has real Turkish coffee and real Turkish tobacco, in exchange for the infidels' francs. American negros hand you marvellous compounds of uncouth denomination; and if the one forgets your order, the other will tell you confidentially that 'Jim is only poor trash! he goes off his head, and gets mixed up considerable some!' Russia has perfumed tea, with slices of lemon in the place of milk, caviare which demands an education before you come to due appreciation, and dried fish, served by a handsome youth in a red silk blouse, and by a beautiful woman in her graceful national costume; a fair modest Austrian, also in national costume, gives you Lager-bier; a heavy but gentle-looking Dutch girl hands you a glass of Advocatus Borrel, if you have the wit to ask for it. In the Australian department, showily-dressed and very beautiful English girls of wretchedly bad style, humiliating enough to the national character if taken as average specimens of Englishwomen, flirt outrageously with the gentlemen always thronging the department, while pouring out the brandied sherry or the Burton beer dear to the souls of Englishmen; and everywhere, as a mark, perhaps, of Anglo-Saxon ubiquitousness, you can get pale ale, to which the men of all races seem to take as kindly and liberally as if Bass and Allsopp were the expressions of a universal instinct.

There is one little fact in the English food department which must not be omitted, though apparently insignificant. Owen Jones, our best illuminator and ornamental artist, has given his skill for the better display of Huntley and Palmer's biscuits; and Crosse and Blackwell have used a beautiful Wedgwood vase for their preserved ginger. The meaning of which is surely the endeavour, now making itself felt through all English life, to get a true and noble manner of art into our daily surroundings, and the desire to unite the idealising presence of beauty with the practical advantages of utilitarian science, hitherto at war together.

I dare not go further afield among the different architectural models in the garden. It is enough to say, that almost every country sends something, expressive of the general style and mode of housing its people. Swiss châlets; an English cottage, of bastard Elizabethan style; a Russian izba, with its strange mixture of art and barbarism, its half

Swiss, half oriental cut woodwork and paint; a Moorish house, white and glaring without, but full of the most lovely arabesque work, and enriched with colour and gilding; a Norwegian cottage; a French model farm, and an imperial pavilion all Sèvres china, Gobelins tapestry, and gilding, as the two extremes of utility and luxury; a model of the simple, rude-looking hut, rather than house, of Gustavus Vasa; a stable for Mehari dromedaries, in the Egyptian garden; an American hospital tent, and, I believe, the model of an American log-house—but this I did not see with my own eyes — these, I think, may be taken as the most striking but by no means all the architectural models. The garden is vast, the buildings very numerous, and as yet much remains unfinished; but enough was completed at the end of May to show the meaning and character of the whole. In fact, the Exhibition is a rich museum, wherein the student may find lessons in almost all arts and all sciences—ethnology among them; or it is only a gallanty-show and a series of shops in the form of a bazaar to those attracted merely by its glitter and display. Here, as everywhere else, the mind sees what it brings; and those who wish to be instructed can be thoroughly well taught; and those who wish only to be amused may lounge away long summer days in idle pleasure and innocent diversion.

XIX.—*Notes on the Tenure and Distribution of Landed Property in Burmah.* Contributed by Colonel PHAYRE, Chief Commissioner of British Burmah.

[*Read June 25th*, 1867.]

WHATEVER may originally have been the relative rights of kings and people to the soil in other countries, in Burmah the ancient book of the Dhama-that, or laws of Menu, represents the people as conferring a share of the produce on their elected king: the right of the king of Burmah, therefore, to a portion of the produce of the land, rests on a very different foundation to that of the ancient kings of Egypt. In the former case it is distinctly laid down as springing from the free gifts of the people: in the latter the right was reserved to himself by the king, when he settled cultivators on the land as mere tenants. The record in the first book of the Buddhist Menu on this subject is as follows: "The original inhabitants of the world assembled and took council together, that as bad practices had become common, they should give command to a worthy man of good principles and raise him to be king, so that he should rebuke those who ought to be rebuked, banish those who should be banished, they giving him one tenth of their thalay rice in return."

In a subsequent book, the sixth of the same code of law, the right to a share of the produce of the soil and no more, is carefully insisted upon in the following words: "But the king, who is master, must abide by the ten laws for the guidance of kings; and although property which has an owner is called the property of the king, yet he has no right to take all. Rice fields, plantations, tanks, canals, whatever is made or produced by man, and customs and ferry duties also, he has a right to. Through successive worlds the first great king, Maha Thamada, has established one tenth as an everlasting precedent, and let that be observed for ever."

This udal or allodial right as regards private owners of land, does not, however, appear to have been strictly observed by the Burmese kings beyond the limits of their ancient kingdom. The right of private ownership appears to have been admitted as obligatory only in respect to the Burmese race. It was not always respected in Pegu, the country of a conquered people speaking a different language.

At the present time in Burmah generally, we find property

in land distributed in comparatively small estates. In British Burmah the average size of these estates is estimated to be about fifteen acres; while the average size of farms, cultivated to raise the staple product of the country, that is rice, is something less than eight acres.

The landed estates appear to have been occupied allodially from the earliest times, but subject to the payment of one tenth of the produce in kind to the king. The succession to land is according to the ordinary law of heritage. But it constantly happens that a family estate remains undivided for several generations, different portions of it being held, and tilled in succession, by various members of the family, without the shares being apportioned among the several co-heirs. It is probable that this practice could not have grown into a general custom as at present, if the population had been denser than it is. But with a vast extent of culturable land unoccupied, and a sparse population, people are not pressed for subsistence, and readily move about to seek a livelihood. There is plenty of new land to be had without reducing the area of the family estate. The division of it is generally postponed until some extraordinary occasion impels one member of the family to demand his share, which frequently leads to a general distribution. As a general rule it is considered in Burmah that land cannot be alienated from the family it belongs to. There appears to be almost a religious objection to parting finally with land. Sometimes, indeed, land is mortgaged with the understanding that it is not meant to be redeemed, and yet redemption is subsequently claimed by the descendants of the original mortgager. But in the various books of the code of Menu, which doubtless have been written at widely different periods of time, the law regarding rights to land is not always consistent. A curious family record exists of a transaction regarding a small estate in the district of Prome, township of Meaday. The land, after having been mortgaged apparently with the view of being finally parted with, was redeemed in the year 1843, A.D., by a descendant of the original mortgager. A translation of the record of this transaction is given at the end of this paper. The joint mortgagee, though stating that redemption was not originally contemplated, does not appear to have resisted the claim to redeem, made by the descendants of the original mortgager. Rent for the use of land, payable to a private proprietor, is comparatively rare in Burmah. It is only known in some townships beyond the delta of the Irrawaddy, and in a few portions of Arakan and Tenasserim, where grain-producing land is scarce, and where population is more plentiful than is ordinarily the case. It is usually paid in kind and seldom exceeds one tenth of the gross produce.

The distribution of landed property in Burmah being as has been described, it would be altogether useless now to consider whether this arrangement might advantageously be altered; whether, in fact, as some have not hesitated to recommend, the rights of peasant proprietors should be swallowed up by capitalists, or large proprietors. Such a plan of spoliation is not likely at the present day to receive a favourable hearing.

We have, thus, briefly considered the state of distribution of landed property in Burmah; the foundation on which the right to that property rests; and the beneficial effect of similar distribution in other countries, whether in America, in Europe, or in Asia, testify to its advantages.

What is the moral to be drawn from this state of landed property as regards British Burmah? What ought we to do therein? The reply is evident. Maintain the right of the peasant proprietor to his land as an allodial possession; dismiss from your minds all fancied exclusive proprietory rights of government to land already occupied; remember that the only government right in land is a right to a share of the produce, and the right to adopt such measures as are necessary to secure that share. Such right must, for the joint benefit of government and the owner, be so exercised, as to leave a clearly profitable estate to the owner. By thus acting, justice will be maintained, the well being of the people will be preserved, and the political as well as the moral benefits to the whole community, if there be any truth in history, will be lasting. We should bear in mind the words of the wise Bacon, in his essay of the true greatness of kingdoms.

Family Record of Redemption of Paddy Land, situated in the Township of Meaday, which had formerly been Mortgaged.

Men-theinga Nauyata-kyau, a petty magistrate of the district of Meaday, states thus, "Having received instructions from my relative, named Nga Ywai, an heir, and inhabitant of the village of Kyoukoo, to redeem a piece of rice land producing about five hundred baskets, called Tsaba Hlau, and situated in the village of Kyoukoo, which was mortgaged by Nga Gan, the elder Nga Yawi's grandfather, Nga Twon, to the father of the Anouk Wen Mhoo Maha Men Hten (named), Men Tseen Thoo Kyau Hten, for one viss of silver,* and according to his charge (to me saying), 'Please to redeem (it).'" Men-theinga Nauyata-kyau applied to Mah Tsa, the wife of the mortgagee, Wen-mhoo Men Gyee Maha-men-hten, for the re-

* A viss weighs 3·65 lbs.

demption of the land by repayment of the original sum of money for which it was mortgaged. Mah Tsa replied, "The rice land aforesaid was not a redeemable mortgage, but an outright sale, without (equity of) redemption." If it should be urged (publicly) that it is customary to repay twofold as the full value and so redeem, then expense will be incurred; both parties, therefore, agreed to dispense with prolonged discussion (or legal proceedings), and as it is stated that the original money bond of mortgage or sale has been destroyed by fire, therefore Men-theinga Nauyata-kyau, according to the direction of Nga Ywai, redeemed the paddy land called Tsaba Hlau, producing five hundred baskets, from Mah Tsa, for one hundred and twenty-five tikals* of nheet-mat-kai silver. It was agreed that thereafter it should not be claimed, that any balance remained due on the bond, or that the mortgagee had any rent or (owner's) claim due on the paddy land aforesaid; and then on the second day of the waning moon, Ta-houng, 1205,† at the time of the redemption of the mortgage by bond, the bond (of redemption) was drawn up by Men Shwe Doung Thee-ree-nau-ya-hta. The silver was weighed and computed with the knowledge of the Toung Queng, Myo-thoo-gyee, Nau-ya-hta Kyau-hten.

The instructions given to Men-theinga Nauyata-kyau were, that should he be able to redeem the land from the Wen-mhoo-men, who resides beneath the golden feet, he was to borrow the money required for the purpose and pay interest on the same. He accordingly, on the value of the land, or one hundred and twenty-five tikals of nheet-mat-kai silver,‡ borrowed in a silver viss of twenty tikals§ alloy, and paying more in weight (on that account). Eight tikals of nheet-mat-kai silver were counted as ten tikals of twenty tikals in the viss alloy silver, and so for nheet-mat-kai silver one hundred and twenty-five tikals (had to borrow and pay) of twenty-five tikals alloy silver|| (in weight), one hundred and sixty-two tikals five moos. The interest for three months on the hundred and twenty-five tikals of five per cent. silver, was eighteen tikals three mats; ten tikels were distributed to the company,

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* Silver with 5 per cent. of alloy, 125 tickals 1¼ viss. The Burmese have no coinage, and in all transactions the precious metals have to be weighed and assayed.

† A.D. 1843. The Burmese have four different eras, three of which have been taken from the Hindus. The fourth, which is that here given, is of native origin, and the one in common use: its commencement corresponds with the year of Christ 639.

‡ That is, 5 per cent. of alloy. § That is, 20 per cent. of alloy.

|| One-fourth alloy.

who were present at the discussion regarding the redemption of the paddy land in question, by Men-theinga Nauyata-kyau; on account of the obligation conferred by him were given ten tikals, and to the assembly who came to see the borrowed money, repaid two tikals five moos. Sum total in twenty-five tikals alloy* silver, the weight of two viss, one tikal two moos and one bai (was paid).

NOTE BY THE PRESIDENT.

The tenure of land in early times, or in a rude state of society at the present time which is the same thing, comes obviously within the legitimate province of ethnology, and, therefore, a paper on the subject of the tenure and distribution of land in Burmah by so learned and experienced a contributor as Sir Arthur Phayre, justly finds a place in our *Transactions*, and in order to make the subject more clear, the present explanatory note is added.

The Burmese belong to a totally different race of man from the Hindus to the west, and from the Chinese to the east of them, being greatly below both in the scale of civilisation. When private property in the land is referred to by a people in the social condition of the Burmese, it is always confined to such land as has undergone the necessary preparation for culture, the culture consisting chiefly of the main cereal, which is rice. This indispensable preparation implies the clearing of the land from forest, the grubbing up of the roots of trees, the construction of dikes, trenches, and sluices for irrigation, with a favourable locality for carrying all these objects into effect.

In Burmah the population is small compared to the extent of the land which it occupies. British Burmah, for example, has an area of 90,000 square miles, with a population of no more than 2,200,000, which is short of twenty-five inhabitants to a square mile, while India has at least eight-fold this density, and China at least ten-fold. The official returns make the land brought to a cultivated condition, as now described, to amount to no more than 1,500,000 acres, or 2,343 square miles out of 90,000. The rest of the country consists of unirrigated unprepared land for dry land culture, without saleable value,—of forests, deserts, and water.

In Burmah, then, the land is superabundant, and when it has an exchangeable value, that value consists, not of the soil, but of the labour, skill, and capital which have been invested in its improvement. In the technical sense signifying

* One-fourth alloy.

the difference in productive power between one kind of land and another, rent has no existence, for the best land is still abundant and awaits only the investment of capital.

The present condition of Burmah as to the relation between population and land is not that of an old Asiatic country but of an European colony, as in the examples of temperate America North and South,—of Australia, and of New Zealand. The fairness of this comparison is corroborated when it is stated that by the public returns the export of the staple product of British Burmah, that is, of rice, amounted to 454,000 tons, after leaving an ample allowance for the universal bread of its own inhabitants.

With respect to the Burmese theory of the first distribution of land between cultivator and sovereign, it is obviously of Hindu origin, as we find by the references made to the Institutes of the Hindu legislator, Menu. It is equally plain that it is also both factitious and mythological. In the primitive condition in which land was first cultivated, there was no one who had the inclination to give or who had the power to exact, nor are the first rude cultivators of the soil likely to agree among themselves in any thing, and above all to agree to tax themselves. In the progress of society, one man by talents, fortune, and even the necessity for a ruler, attained a superiority over the little community of which he was a member, and naturally proceeded to exact a revenue from the only object that could yield it, the produce of the soil, and he fixed its amount at a tithe of the gross produce, probably for no better reason than that the numeral ten was at the time the limit of the numerals of his language.

XX.—*On the Antiquity of Man.* By JOHN CRAWFURD, Esq., F.R.S.

[*Read June 25th*, 1867.]

THE discovery of human remains cotemporaneous with those of animals long extinct, in caves and in lake pile-buildings, attests the great antiquity of man; and it is equally attested by the discovery of tools, weapons, and implements, the unquestionable work of his hands, in the "drift" or loose alluvial gravel. Independent of this direct testimony, many facts connected with his progress towards civilisation afford proofs of his antiquity; and it is this class of evidence that I propose to make the subject of the present paper.

Before entering on the main question, I shall offer a few observations on the causes which seem to me to account, in a good measure, for the admitted paucity of man's own remains. In the "drift," or most recent alluvial formation, we find the fossil bones of the mammoth and rhinoceros, with stone implements in abundance; but down to the present time not a single human bone, and even in caves but a very small number. In the ordinary savage state, such as it even now exists in many parts of the world, man is ever few in number compared with the lower mammals; and when he first appeared on the earth —when naked, unarmed, without language and without fire— the disparity must necessarily have been still greater. In that almost helpless condition he had to contend for food and for life with ferocious beasts of prey, with nothing to rely upon but a superior brain and dexterous hands. Under such circumstances, the wonder is, not that he should be few in number, but that he should have been able to maintain existence at all.

Men, on their first appearance, when they were the cotemporaries of now extinct lions and tigers, being few in number, it would necessarily follow that their remains must also be few. But causes most probably have been in operation which would diminish even the small number which would otherwise exist. The first men, struggling to maintain a bare existence, would have neither time nor inclination to attend to the bodies of the dead, but, like the lower animals, abandon them to be devoured by beasts and birds of prey. In this case, the comparatively small bones of the human body would be equally consumed as the flesh by wolves, bears, and hyenas, while the larger bones of such

animals as the elephant and rhinoceros would escape. The few human remains, the cotemporaries of man with extinct animals, have been confined to caves where the dead were undisturbed, until their bones ceased to be food for beasts of prey. In the "drift," the only geological formation in which we expect to find human remains, it may be added that there is the same dearth of the remains of the lower animals, the large bones of the larger being the exceptions.

A careful attention to the remains of the dead, originating in a good measure in the rise of the religious sentiment, must have been of a much later time than man's first and earliest appearance. Even among savage tribes still existing, funeral rites are often carelessly performed. When these were by cremation, as seems to have been not unfrequent—as in the example of the Danes, to whom we owe the shell refuse heaps—the bones necessarily disappeared. Even when the dead are disposed of by inhumation, we know that the ceremony among cotemporary savages is very carelessly performed, as by some tribes of negroes on the Western Coast of Africa. In many cases, indeed, the rite does not amount to inhumation at all, the corpse being left exposed on a trestle in some remote place, and there abandoned to be the prey of carnivorous animals, when the wolf, the hyena, and the wild dog would not leave a bone uneaten.

The different causes now enumerated will to some extent account for the scarcity of the remains of early man which have been found, compared with those of the lower animals. I refer here, of course, to the latest geological formation; for man, being one of the latest creations, we cannot expect to find his remains in the earlier formations, in which those of the lower animals are frequent.

I come, however, now to the main subject of this essay—the antiquity of man from other evidence than that of his own remains, or of objects the undoubted work of hands. Among these, language is one of the most important and instructive. That articulate language is as much an acquirement or invention as the fabrication of a tool or weapon is sufficiently proved by its absence in children, in the deaf and dumb who have no means of acquiring it, by its absence in the lower animals from want of capacity, by the vast number of languages wholly different from one another which still exist, to say nothing of those which have perished, and every one of which must be counted as a separate and independent invention.

Man, then, when he first appeared on earth, was without articulate speech, and, like the lower animals, must have expressed himself by what was little better than mere interjections. He

had, therefore, to frame a language—a seemingly difficult achievement, yet one which every savage tribe has been able to achieve, and this not in one place only, but in several thousand separate and independent localities. It follows, then, that as every tongue, even of the rudest savages, is regularly constructed and perfect for its own purpose, many ages must have passed before language could have reached this maturity.

The quality of languages, independent of culture, will, no doubt, depend on the capacity of the race which framed them, but everywhere they adequately express all the ideas of those that speak them. Even the languages of a people so low in the scale of humanity as the Australians—incapable of reckoning beyond duality—are found to be, not only skilfully, but even complexly constructed.

Language is improved with the progress of society, just as are the ordinary arts, and this is an additional proof that, like them, it is a mere acquirement. The language of mere savages seldom exceeds five thousand words; but those of barbarians will amount to double this number; while the languages of civilised Europe will amount to sixty thousand.

The facts now adduced afford conclusive evidence of man's antiquity. The speechless savage had to frame a language, and to reduce it to order and regularity. We may judge, then, what ages must have transpired from the first attempts to give names to a few sensible objects, to the completion even of such rude languages as those of the Australians, of the Feejeans, and of the Esquimaux; and how many more must have passed before the discovery of the art of writing, an acquirement which has been made only by the most happily circumstanced and the most highly gifted races of man.

Our British forefathers, when, some two thousand years ago, they were first described by civilised man, were far from being savages, but they were certainly illiterate barbarians. Our Saxon ancestors, who, some five centuries later, conquered the Romanised Britons, and laid the foundation of the English language, were illiterate barbarians like the Britons. After some six centuries' possession, the Saxons were conquered by a people speaking a derivative of Latin, a large infusion of which became an element of our language. From the time in which this infusion began until the English language became a suitable vehicle for the poetry of Shakespeare, five centuries had transpired, and another century before it became the prose of Milton. From the arrival of the illiterate Saxons to the time of Milton, twelve centuries had passed away, and this domestic example may be adduced as satisfactory evidence of the long time which is indispensable to the completion of the language of a civilised people.

Like language, the ordinary arts bear abundant proofs of man's antiquity. In no case are they like the nest of the bird, the web of the spider, or the cocoon of the silkworm—the results of instinct—but, on the contrary, pure inventions, the offspring of man's brain and hands. The distaff and the loom are as much inventions as the steam engine or the telegraph. They have been invented in many different and independent localities, and at so early a time everywhere, that in no instance have we any record of their discovery. The production of fire by the rapid friction against each other of two bits of dry wood does not appear a very obvious invention, yet no tribe, however dull and rude, has ever been found who had not made this discovery, and we may, notwithstanding, readily believe the first men to have wandered for many ages cold and miserable before they had hit upon it. It was a discovery made by man after he had supplied himself with a club, and clothed himself in the skin of a wild beast: it may be deemed, indeed, to have been his earliest luxury.

The discovery of the metals, without a knowledge of which man must have continued for ever a feeble savage, attests man's antiquity, for in no case can it be traced in so far as concerns the most important of them. The first tools and weapons were of wood and bone, and even the use of stone implies a step in advancement. Beyond this step, many tribes had not advanced when first seen by civilised man. This was the case with all the tribes of the Pacific, who were ignorant of all the metals, even of gold, the most obvious and easy of discovery. It was the same with most of the nations of America, from the Esquimaux to the Fuegians, the Mexicans and Peruvians excepted, for these were acquainted with gold, silver, tin, and copper; but with the first and last only because they existed in the native state, and required no process of reduction from the ore.

Of iron, by far the most important of all the metals, even the most advanced nations of the new world were wholly ignorant. The difficult art of making malleable iron seems to have been immemorially known and practised, even by the rudest people of the old world: but we may fairly conjecture that the first discovery must have been made by nations who had previously made considerable advances in civilisation—advances beyond those which had been reached by the Mexicans and Peruvians —and that from them the art came to be disseminated among ruder tribes. I am led to entertain this opinion from a consideration of the class of languages to which I have myself given most attention—the Malayan. It is the same word of the Malay or Javanese language which is given to iron, and generally even to steel, in all the languages of the Malayan Archi-

pelago. It is the same in all the languages of the savages of Borneo, which otherwise differ essentially from the cultivated Malay and Javanese. Yet these savages, in possession of a pure ore, manufacture very good iron and even steel. The same word for iron extends to the diverse languages of the Philippines and even to the language of remote Madagascar. Were the languages of the Negroes of Africa investigated, and the rudest of which are known to practise the art of fabricating malleable iron, it would probably be found that it was acquired from the Mauritanians, Carthaginians, or Egyptians on the western, and from the Hindus on the eastern side of the Continent.

Cultivated plants and domesticated animals yield striking evidences of man's great antiquity. To begin with plants: the principal cereals, wheat, rye, barley, rice, and even maize, have been so long cultivated, that they cannot be traced to their wild originals. Man had exhausted the wild plants; and then, urged by necessity, invented the art of cultivating them. No doubt, this culture began at many different and independent points; but its remoteness and obscurity are such, that the credulity of nations has transferred it to the region of mythology.

It has been the same with some of the most important of our domestic animals. Thus the horse, the camel, and the sheep, like the principal cereals, no longer exist in the wild state. The originals of our oxen have long disappeared from Europe and Western Asia, and but for their fossil remains, and a few historical hints, we should not have known that they had ever existed in these parts of the world. They still exist in the forests of India, a region which is now in this respect what Europe was two thousand years ago. The semi-aquatic buffalo in the wild state exists only in the forests of Bengal, while the domestic is found diffused from China to Spain and Italy. We had come to the conclusion that the dog in the wild state had been long extinct, until of late years we discovered one in India and another in Australia.

It seems to be for the most part only those domesticated animals the least useful to man, or the most difficult to reduce to servitude, that still exist in the wild state. The ass is still abundant in the deserts of Arabia, of India, and of Tartary; the wild elephant is probably still as abundant as when man first accomplished the arduous task of taming it; and the llama and alpaca in the wild state are certainly more numerous than the domestic ever could have been in Peru—the only country in which these animals were ever tamed, bred, and used.

The first domestication of birds is probably of much less antiquity than that of quadrupeds, because more difficult to accom-

plish, and, when accomplished, of far less utility to man. On this account, and no doubt also because they had better means of escaping man's persecution, we are able always to trace them to their archetypes. We have the wild originals of the goose and duck, although of different species, from Western Europe to Japan. We have the prototypes of the common fowl from Western India all the way to Japan, the wild turkey in Mexico, and the rock pigeon everywhere.

As the art of writing, from its nature, must have been the invention of a far more advanced state of society than the ordinary arts, we might expect that its first discovery would in some cases have been ascertained. This, however, is not so; for although the precocious nations of the east, from Egypt to Japan, and from Northern India to Java, have invented alphabets by scores, their first invention is in no case ascertained, and, like wheat and rice, they have been considered as the gifts of the gods.

It may seem to derogate from the value of the evidences now adduced in favour of man's antiquity, that the veritable records which he has left of his own existence are comparatively recent. We have here, however, to take into consideration the many ages, even under the most favourable auspices, and with the most highly endowed races, which must have transpired before man had acquired such knowledge and maturity of mind as would enable him to make a reliable and enduring record of his own actions. He had to pass through all the stages which I have enumerated. The dumb and naked savage had to frame a language,—to acquire the arts requisite to furnish himself with a permanent supply of food and clothing,—to discover the useful metals,—to invent the art of writing,—to acquire such a knowledge of the heavenly bodies as would enable him to construct a kalendar,—and, in short, to attain that maturity of intellect which would enable him to make a reliable and transmissible record of his own actions.

With the exception of the early stages of the progress now described, tribes still exist, or existed when first observed by civilised man, that, owing to the absence of the accessories indispensable to success, or to defect of intellectual capacity, have never reached the stage in which a reliable record of their early actions could possibly have been made. The natives of Australia, for example, from the privations of their position and their innate incapacity, could not even have made any tolerable approach to it; and had all the races of man been as unhappily circumstanced, all mankind must, like them, have continued to this day mere savages.

Such people as the Esquimaux, the Andaman Islanders, and

the Fuegians, were, by the mere privations of physical geography, incapacitated from advancing beyond the humble stage which they had reached. Other tribes, however, more favourably circumstanced, although probably without superior mental capacity, had made considerable advances, such as the Tropical Islanders of the Pacific, who had a permanent supply of animal and vegetable food, tolerable clothing, fixed dwellings, with strong canoes in which they made comparatively distant voyages. Still they were illiterate, and for the most part cannibals. Some of the nations of America had advanced a considerable step beyond the Islanders of the Pacific, for the Mexicans and Peruvians possessed a kalendar, and had a knowledge of some of the metals, although not of the most useful of them. But they too were illiterate, and, moreover, not unfrequent cannibals.

The countries in which, through the auspicious character of their physical geography, and the intellectual quality of the races inhabiting them, the earliest civilisation sprang up, are few in number and can readily be enumerated. They are confined to Egypt, Syria, the valleys of the Tigris and Euphrates, India and China, and in a minor degree to Persia, the region lying between India and China, Japan, and two or three of the large islands of the Malayan Archipelago. In all of these, writing had been early discovered and a kalendar formed—arts indispensable to the rudest record of human events.

But it was not necessary alone that the capacity of framing record should exist; it was not less necessary that the monument containing it should be of durable materials, and be under conditions favourable to its preservation. In regions subject to violent alternations of heat and cold, drought and moisture, the most lasting materials are in time decomposed, while in tropical climates the same destruction is produced by a rank vegetation.

Of all parts of the world, the valley of the Nile is the most likely to have generated an early civilisation, and unquestionably the most likely to have preserved a record of it; while its inhabitants, partaking of the precocious character common to other nations of the east, must soon have exhibited the capacity to avail themselves of these peculiar advantages. Egypt, whether as a sandy desert, or as watered by the Nile, never could have been covered by a dense forest—a main obstacle to man's early progress when he had nothing but fire and stone axes to overcome it with. The inundations of the Nile, at the same time, not only gave perennial fertility to the soil, but facilitated the labour of tilling it. We may safely believe, then, that Egypt must have been one of the countries in which arts

and letters made the earliest advance. It has proved also to be the country in which the monuments of an ancient civilisation have been best preserved, owing to the drought and equability of its climate, and the durable nature of the materials of its monuments.

The historian, Hume, makes true history to begin with the first page of Thucydides; and if by history is meant a truthful and rational narrative of human events, to the exclusion of fable, mythology, and tradition, this is, no doubt, true. This would carry us back in the history of man to no more than four hundred and seventy years before the birth of Christ; but in the time of Thucydides the Greeks had been long a polished and literary people, although their arts and letters had been in a good measure borrowed from the eastern nations.

Man's story, however, goes far back beyond the time of Thucydides or of Herodotus, and, although it may not deserve the name of history, is, at all events, entitled to that of archæology founded on a reasonable chronology. Egypt is, far beyond all other countries, that in which the chronicle of civilised man can be carried to the highest antiquity. After many dynasties of gods and demigods, the earliest date which, with any show of authenticity, can be ascribed to the history of Egypt begins with the first dynasty of civil rulers, and the learned make this to correspond with the year before Christ 8986, which would make the first dawn of reliable history 10,833 years old, reckoning to our own time. The pyramids of the first dynasty were built, according to the same authority, B.C. 3460; the great pyramid B.C. 3280, respectively 5,327 and 5,127 years ago. I take these dates from the learned work of M. Lesueur, a pupil of Champollion, the discoverer of the art of deciphering the long unknown symbolic writing of Egypt.* At the earliest of the dates now referred to the Egyptians were already a civilised people, in possession of a high scale of numbers, of a kalendar, and of the art of writing; while at the latest of them they were certainly a numerous people, skilled in architecture, and equal to the construction of gigantic monuments.

On the walls of the temples and catacombs of Egypt we find paintings representing men resembling the Egyptians of the present day, with Ethiopian captives or slaves, not differing from the Negroes now in the same condition. We see on them also the cattle of the present day, already possessing the variety of form and colour incident to long domestication. In those tombs or catacombs there have been discovered ears of wheat of the same peculiar variety as that now cultivated. The

* "Chronologie des Rois d'Egypt", par J. C. B. Lesueur. Paris, 1848.

actual antiquity of the man of Egypt must be counted from the first appearance of the naked and helpless savage of the Nile valley until his attainment of the position now described.

The history of the Jews can pretend to no such antiquity as that of the Egyptians, or even as that of the Chinese. Although I have no doubt that the Jews were intellectually greatly superior to both Egyptians and Chinese, still they were a small people, inhabiting a comparatively poor and narrow territory; while they were, at least, as much a pastoral as an agricultural nation. They had no enduring architectural monuments, for their peculiar religion confined their public architecture to a single temple—a fact which attests the smallness of their numbers and the narrowness of their territory. Even this one temple, which in size did not exceed an ordinary London parish church, was built for the most part of perishable materials, their want of skill obliging them to have recourse to the more advanced commercial states of the Mediterranean coast for artisans, for timber, and for the metals.

The early Jews, however, had long passed all the first stages of man's progress; for they possessed an adequate scale of numbers, a kalendar, and even the art of writing, almost as soon as we have the first mention of them. All our evidence for the antiquity of the Jews is to be gathered from their sacred writings. There is a general assent among critics in fixing the building of the temple to the year before Christ 1015—a date which would make it 2,445 years later than the construction of the oldest of the pyramids. Reckoning backwards, the Exodus preceded the building of the temple by 480 years, and the Bondage in Egypt is given as having lasted 430 years. These united sums give the year B.C. 1925, and beyond this we cannot carry the chronology of the Hebrews, unless it be the arrival of Abraham in Egypt, which is given as B.C. 2499, which would make this event to have happened 789 years posterior to the building of the great pyramid. To estimate the actual antiquity of the Jews, we have to reckon the ages which must have elapsed since the first appearance of the naked and speechless savages of Judea, feeding on the honey of wild bees and the raw flesh of wild animals, which as yet, ignorant of danger, hardly attempted to escape man's pursuit. In reference to Hebrew chronology, M. Lesueur, an ardent Egyptologist, exclaims, "For eighteen hundred years we have been the dupes of the foolish vanity of the Jews: it is time the mystification should cease."

There are other races of man which, from their auspicious position, must have made a very early advancement, although, probably, not equalling that of the Egyptians. The valleys of

the Tigris and Euphrates, from their climate, fertility of soil, and facility of irrigation, with the genius of their inhabitants, were formed by nature to be the seat of a very early civilisation; and hence we have abundant evidence of such a civilisation having sprung up, rivalling that of Egypt in extent, and greatly surpassing it in power. Its perishable monuments, however, do not furnish us with the same satisfactory evidence of antiquity as do the enduring monuments of Egypt. Nearly all we know on the subject is derived from the Greeks, who report Babylon, on native authority, to have been built 2,230 years before the birth of Christ; while they carry the history of the kings of the country on the Tigris no farther back than B.C. 1273.

Even if Assyrian civilisation had been of equal antiquity with that of Egypt, its ancient monuments were not of a character to bear testimony to it. Instead of enduring stone, they were built of bricks, often only sun-baked. The climate, too, contributed to the destruction of these comparatively frail materials; for instead of the unvarying drought of Egypt, it was characterised by violent alternations of heat and rain. Hence the Assyrian monuments are now but mounds of mouldered brick, excavations in which have discovered palaces, temples, statues, and other evidences of the arts, which show that the people who constructed them had attained a large measure of civilisation, probably not inferior to that of cotemporary Egyptians.

With regard to such gigantic monuments as those of Assyria and Egypt, Mr. Grote observes, that they are the products of an "unbounded command of naked human strength." But on this observation I have to remark, that the bare fact of the existence of unbounded labour supposes also the existence of a numerous people, and that a numerous people is itself satisfactory evidence of a large advance in the arts, never seen either in a savage or in a barbarous condition. The monuments of Thebes and Babylon could not have been constructed without a considerable knowledge of the mechanic arts, and even of skill in architecture, and, therefore, they could not have been constructed by "naked human strength" alone.

Several of the valleys of the great rivers of India must, from their fertility, freedom from the impediment of forests, facilities for irrigation, and innate capacity of their native inhabitants, have been the seats of a very early civilisation. We possess, however, no such evidence of the antiquity of Hindu as we have of Egyptian civilisation. The ancient monuments of the Hindus, in magnitude and laboriousness, equal those of the Egyptians, but they are far from doing so in skill; and this is the more

striking, since they are all of far more recent construction. Even the materials of the Hindu monuments, consisting generally of basalt or sandstone, are, for durability, inferior to the granite of the Egyptian monuments; while, instead of the perennial drought of Egypt, they are subject to alternations of great heat and great moisture.

A single uncorroborated written authority carries Hindu history as far back as the year B.C. 2440; but even if this could be trusted, the date would be posterior to the building of the great pyramid by 840 years. The authority in question is a Sanskrit history of the little remote state of Cashmere, translated by a great orientalist, the late Horace Wilson. The earliest reliable written records we have of Hindu story (history, the Hindus have none), are the dates inscribed on certain stone pillars erected by a king named Asoka; and these exist in various parts of Northern India, extending from Orissa to Gujrat. They carry us no farther back than the year B.C. 250; so that a date which is by 240 years posterior to the battle of Marathon, affords no evidence of a high antiquity of man, or even of the Hindus.

Some of the most celebrated Hindu monuments, which, from decay by decomposition or dilapidation, present every appearance of antiquity, surprise us only by their comparative modernness. The celebrated temple of Jaganath was built by a Hindu prince, of the state of Orissa, in A.D. 1198, or 132 years after the Norman conquest of England; and its neighbour, the "Black Pagoda," long in a ruinous state, was built by another prince of Orissa, in 1241, or 240 years after the commencement of the Turkish and Persian conquests of Northern India. The wonderful caves of Carli cannot be traced farther back than the first century of our time, and those of Elephanta are as late as the tenth century. Of traditional Hindu dates, the best authenticated is that of the death of Buddha, and this corresponds with the year before Christ 543; but the religion of which Buddha was the founder was but a heresy from the Braminical, and to the origin of this last we can ascribe no date.

My friend Mr. James Fergusson, in his instructive and splendid description of the Rock Caves of India, comes to the conclusion that the Kaliyug, or last of the four epochs of the chronology of the Bramins, is a true historical era, and not a calculated astronomical one, like the three earlier. The Kaliyug commences 3,001 years before Christ; but even this would give to the Hindus an antiquity falling far short of that of the Egyptians. Indeed, Mr. Fergusson justly observes, that the Egyptians had ceased to be an independent nation before the

earliest monuments of the Hindus had been constructed. Yet the Hindus were an advanced people, when they could even erect stone pillars with inscriptions, and these inscriptions with dates. As a race, they were, without doubt, just as old as the Egyptians, but they possessed neither the same capacity nor the same opportunity of making an equally early record of their own existence.

The civilisation of China is probably of at least equal antiquity with that of Hindustan. The rich alluvial and well-watered valleys of the great rivers, inhabited by a race of men bodily and mentally superior to the Hindus, must have been the seats of very early civilisations. The Chinese, however, have no ancient monuments to give evidence of early progress. The oldest is their monster wall, which, with its rampart, towers, and gates, 1,200 miles in length, implies the investment of more labour than do all the monuments of Egypt put together. It was built, however, only 200 years before the birth of Christ, and cannot be called ancient in reference to the subject of this paper, since it is by two centuries and a half later than the age of Pericles.

Excluding their fabulous story, the Chinese themselves carry what they consider their authentic history to the year before Christ 2,357, or the epoch of Fohé, their first temporal king; but even this would fall short of Egyptian history by 6,629 years; and it may be added, that the building of the pyramid of Cheops preceded that of the great wall by above 3,000 years.

I may conclude this paper with a recapitulation of the conclusions which may, I think, be legitimately deduced from the facts stated in it. Man, although the latest creation of the class of beings to which he is most nearly allied, is yet of vast antiquity, although that portion of his history which has transpired since he acquired the art of making a durable and authentic record of his own existence forms but a very small fraction of it. From the time in which he acquired the skill to frame this record, we have to trace him back over the many stages he had to pass through up to the discovery of his remains in caves, and of those of his handiwork in the most recent geological formation, "the drift." We must, indeed, go even beyond this, and up to his first appearance, when he was without speech, ignorant of every art, and, like the lower animals, chiefly guided by instinct. This is to be inferred from the fact that, where material evidence of man's presence exists, whether in caves or "drifts," he is already found in possession of implements of stone, implying a considerable step in advance.

But the localities in which the physical geography of the land

and the genius of its people combined to effect such an early social advancement as was necessary to the attainment of the skill indispensable to the production of a reliable and enduring record of human events, however rude and imperfect, have been few in numbers, and confined to such as I have endeavoured briefly to enumerate. Over the greater part of the earth's surface auspicious locality and genius of race were not so united as to have enabled mankind to reach that point. The red man of America, the shepherds of Tartary, the black races of Africa, never even approached it. The most highly endowed and the most happily situated of the nations of Europe had reached it only in comparatively modern times, and might not, indeed, have reached it at all, had they not borrowed largely from their more precocious neighbours of Asia.

The physical geography of the wide region of Tartary, independent of the quality of race, has ever made it impossible that man should have advanced beyond the condition of migrating shepherds, who have now and then united in formidable hosts, and proved the scourges of civilised man.

The peculiar privations, both as to locality and race, which characterise some regions of the earth, have made all advance in the arts beyond what was indispensable to a bare preservation of existence impossible, and of this we have examples in the land of the Esquimaux and of the Australians. In a few localities even this amount of skill had not been attained. Thus, Spitzbergen, Nova Zembla, and even Iceland, when first seen by civilised man, were uninhabited; and when we see the Esquimaux living and multiplying and spreading in equally rigorous or even more rigorous climates, it is hard to believe but that they must once have had an aboriginal population, seeing that at least animal food is abundant in them. If they had, they must have perished for want of skill to maintain existence. New Zealand would seem to have had no native inhabitants until it came to be colonised by savages and cannibals from the tropical islands of the Pacific. It is difficult in this case, too, to believe that prolific nature should have left so large a country without aboriginal inhabitants; yet here it is more probable that the aborigines were either extirpated or absorbed by the more powerful invaders, than that they perished from want of skill in the arts.

XXI.—*Notes on Cambodia and its Races.* By G. THOMSON, Esq.

[*Read July 9th,* 1867.]

CAMBODIA, as we find it at the present day, is but a miserable remnant of "Khamain," which existing traditions proclaim to have been one of the most powerful and extensive kingdoms of eastern Asia, peopled by a civilised race, who built the walled cities of the plain, with their splendid stone temples and palaces, bridges, and reservoirs, and traces of whose history will, I believe, be found in the writings inscribed upon the polished stones of their monuments in characters that are alike a puzzle to the Sanscrit and Pali scholars of Siam, and to the *savans* of Europe.

According to the Siamese annals,* Cambodia, down to the middle of the fourteenth century, extended as far west as "Ayuthia," on the Menam river of Siam. In April, 1350, of the Christian era, during the reign of the Siamese King N. Tong Ramathi-bod, Ayuthia became the Siamese capital. From 1350 up to 1863 Cambodia appears to have been undergoing a steady process of absorption by the neighbouring nations until it became a dependency on Siam, having been reduced to a narrow strip of land bounded on the east by the Mekong river, and on the west by Batabong and Nagor Siamrap, Raheng, and the Northern Laos provinces.

Batabong and Nagor Siamrap are the two provinces in which the bulk of the Cambodian antiquities are to be found, and they were the last two provinces which Cambodia lost, having been ceded to the Siamese eighty-four years ago.†

In 1863 the French government concluded a treaty with the Siamese which rendered Cambodia an independant kingdom, under the joint protection of France and Siam. The king was formally crowned, and the government organised pretty much after the Siamese model. The heads of the various departments of government are stationed in Pnomb Pinh, while each province of the country has a resident governor, sent out from the seat of government, and whose duty it is to attend to the administration of justice, collect the taxes and imposts, and

* See the Chinese Repository.

† This information is contained in a letter which I received (after my visit to Cambodia) from the present king of Siam.

generally to look after the interests of the government. In passing through the country the painful conviction was forced upon us, that personal and government interests were so well looked after as effectually to crush the energy of the population. Utter listlessness and apathy are common characteristics of the Cambodian. If he be a freeman and producer, he is so heavily taxed as to hold out little inducement for continued exertion. If a slave, he knows that in common with the beasts of burden in the establishment, his owner will provide for him. In the capital, Pnomb Pinh, and, on the banks of the Mekong, the French influence and the growing trade with Cochin China, appear to be slowly developing the latent energy of the natives. In the native bazaar the demand for the varied articles of European manufacture is steadily increasing; while a ready market is found for the valuable products of the country. The Pnomb Pinh bazaar is the most animated and interesting scene in Cambodia. The majority of the merchants are Chinamen: there are a few Anamites, and still fewer Cambodians. Buyers and sellers are busy everywhere, and a keen spirit of competition is observable in the attractive display of merchandise in the line of shops and stalls. Long trains of produce-bearing elephants and buffalo waggons, with their Cambodian drivers, are passing to and fro, or have halted to discharge at some Chinese store. Light elegant conveyances flit past, in which women in picturesque costumes are seated, driving pairs of fleet bullocks covered with gingling bells. Up the entire length of the centre of the bazaar low stalls alternate with square mats spread on the ground, on which every description of native food and fruits are exposed for sale; while seated in eager circles on the mats are noisy gambling parties. A shock of disgust is felt as a loathsome leper brushes past, or a feeling of surprise at the prostration of the multitude while a noble is passing.

Among the varied produce of the country to be found in the bazaar are silk (native, raw and manufactured), tobacco, gum-lac, cotton, sapan wood, buffalo and deer horns and hides, ivory, gamboge, cardamoms, cardamoms (bastard), dye woods, sugar, rice, black pepper, etc.

When I visited Pnomb Pinh in February last the old bazaar was being pulled down and a new one erected further from the verge of the river. The new bazaar was being constructed after the design and under the superintendence of a French architect, who was also busily engaged in the erection of an elegant new palace for the king. The primitive bamboo and attap or palmetto huts in the business portion of the town were rapidly giving place to houses built of brick and mortar. A wide road

communicates between Pnomb Pinh, the present capital, and Oudong the late capital of Cambodia. This road is lined on both sides with regularly planted rows of trees, and is raised above the level of the surrounding plain, high enough to stand above high water mark during the annual inundations. It is no mean triumph of engineering, and shows that there still remains in the country some of the skill of the ancient building race whose works have so long outlived their history. The road is about four miles long, and is sustained between strongly built stone walls. At Oudong the chief object of attraction is the old palace with its surrounding lotus gardens and reservoirs. The huts of the natives are like the huts common to the outskirts of Pnomb Pinh and the interior of the country. They are raised on piles, have a wooden or bamboo framework, and the walls and thatch are of attap or of rice straw. Beneath the huts are to be seen boats, which are laid up during the dry season, and to which the families are compelled to resort during the floods.

While giving a general idea of the native houses, I think that the lake dwellings of Tal-sap (the great lake of Cambodia) are worthy of special notice, as they resemble so closely in their details the description given by Dr. Keller of what the lake dwellings of Switzerland must have been. During the dry season the average depth of the lake, which I ascertained from a series of soundings made while crossing, is four feet; its length is said to be about one hundred and twenty miles by sixty or seventy at its broadest part. Owing to this shallowness many of the dwellings are built far from the verge of the lake. There are others, however, that are built close upon the bank.

In crossing Tal-sap, our boats frequently rubbed against sunken piles, which were doubtless the remains of former lake dwellings. In one or two cases we found what, from its extent, might be termed an entire village raised upon piles; where the houses were raised in parallel rows, leaving a space between for the anchorage of the boats to which the families betake themselves during the annual rising of the lake. The surrounding country abounds in woods that resist the action of and are heavier than water. Mei Klong and Mei Carcaw are the native names for two varieties of wood that are greatly used for the piles on which these villages are raised. About eight feet above the water and fixed upon the top of the piles, either by rude morticing or by binding with ratan, are the cross beams upon which the common platform of the houses are fixed. The platform consists of bamboo, or small unbarked branches of trees, fixed down in a single layer, parallel to, and slightly parted from, each other. A considerable breadth of platform

fronts each dwelling, and is used for the preparing and drying of fish. Along the back and front of the platform the piles project high enough to support cross-bars of bamboo, on which the fishing nets are hung out to dry. In the centre of the platform the piles also project to form supports for the slight work upon which the attap or the straw of the walls is fixed. The thatch roofs of the houses have a very low or obtuse angle, so as to offer as little resisting surface as possible to the winds common on the lake. In these lake villages there are many Cochin Chinese and a few Cambodians, fisher families, who betake themselves to them when the waters of the lake are subsiding, and they remain there taking and curing fish up to the end of the dry season.

The origin of such lake dwellings can be readily accounted for in this instance. The greater part of the banks of the lake are not suited for human habitations, as they consist of miasm-breathing swamps and marshy forests. The shallowness of the lake during the time of year when abundance of fish are caught, and the practice throughout the country of raising houses on piles, which necessity must have suggested at an early period to the race, would lead to the adaptation of such houses to the fisheries of the lake. This fresh-water lake teems with fish in infinite variety, and of the most excellent quality, and they are caught in such abundance that the fishers in the lake dwellings are careful in selecting only the finest to be salted and dried for exportation. The finest salt fish may be bought on the lake for about six shillings per picul.

A great quantity of the fish are conveyed down by Cochin-Chinese to their oil factories, established on the banks of the main outlet of the lake. A large proportion of the Cochin-Chinese in Cambodia are engaged in this fish-oil trade.

THE NATIVES IN THE INTERIOR.

The present Cambodians are scattered over the interior in handfuls. In their Dans (villages) there are frequently not more than three or four families to each, and over these three or four families there is a Chow Dan (Manderin) who collects the taxes and administers justice. In these small hamlets we generally recognised the Chow Dan from the appearance of his house, or his wearing a silk "languti" (a cloth about six feet long, fixed round the waist, having its ends passed through between the legs and fixed up behind). On ordinary occasions this "languti" constitutes his entire costume. The chief occupation of the natives consists in cultivating a few acres of rice round their villages. The slaves and wives of the mandarin cultivate a small quantity of cotton, tobacco, and silk for domestic use.

In their houses we frequently saw the wives and families of the petty chiefs engaged in dyeing and weaving the silk or cotton into fabrics of brilliant hue and varied pattern; or preparing the tobacco for use.

The Cambodian loom is similar to that used by the Malays, but is capable of weaving simple patterns; the silk or cotton being dyed before the fabric is woven, whereas in the finest fabrics of the Malays, or in the "Batak Sarongs of the Javanese," the cloth is first woven; a design in bees-wax is then drawn upon it, and the cloth is dyed; the wax is then removed, and used for covering the dyed portion of the cloth, and the portion of the cloth that is first protected is treated with a second dye of different colour, and so on until the pattern is finished.

The religion of the ordinary Cambodians in the interior is of a very rude and primitive order: all their calamities they attribute to the influence of some evil genius of the forests whom they have unwittingly offended. It is a common practice among them, before setting out on a journey, to seek the kindly intervention of the spirits supposed to dwell in the trees. On one occasion I proceeded with them to an obscure part of a forest, near the Lynchie mountains. They invited me to come, and promised to conduct my devotions, as the spirit could make nothing of a foreign tongue. They halted near a huge tree against which was raised a great stone altar. They had brought with them a jug of water, a little arack, some boiled rice, salt fish, and fragments of a fowl. Filling one small vessel with water, another with rice, and a third with arack, they placed them upon the stone: then selecting a number of large leaves from a particular shrub, they placed small portions of the food on each, and distributed them in a circle round the tree. A venerable chief then approached the altar with his hands clasped above his head, and recited a long-winded chant inviting the demon to approach the repast. He then placed fragments of fowl and spices in the rice, and went through the form of waiting upon an imaginary being. This was followed by another long chant, beseeching the spirit to allow us to pass "Si-nook Si-by" (with safety) on our journey. The ceremony concluded by leaving the food and drink upon the altar, and around the tree. In the more considerable settlements, and in the capital, the Buddhist religion predominates. At Pnomb Pinh the chief priest of the royal temple has been elevated on account of his learning and piety, to the rank of Somdet (prince).

The food of the Cambodians consists chiefly of rice and dried fish—they do not appear to be great hunters. In some places they use the gun, with which they kill an occasional tiger after they have suffered by its nocturnal visits to the hamlet. They set

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THE KING OF CAMBODIA (P. 251)

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LAOTIAN (FEMALE)—(P. 251)

little value on the skins—I have bought skins for two shillings and sixpence each. There are abundance of deer (which the natives hunt for their hide and horns) to be found in any part of the country where there is an open prairie. The prairie also affords shelter to the hog, a small species of wild dog, and varieties of the tiger and leopard. The wild elephant and rhinoceros are chiefly found in the forests in the mountain districts.

In the physical organisation of the body many of the natives believe, in common with the Siamese, that fire, air, and water are three elements which occur in the body; and that a body in perfect health has these three elements in a perfect state of balance, and that a predominance of one or other causes sickness. Blistering the stomach is a kind of treatment which is applied to a variety of disorders.

In fishing they use the net, the spear, and the line and bait. That the use of the line and bait among the Cambodians is as old as their stone temples, is shown in one of the bas-reliefs in Makon Wat, where a river containing fish is represented. There is a boat above, and a figure in the stern dropping a small line, which appears to be attracting the fish below. The majority of the native boats are cut out of the solid trunk of a tree, and afterwards expanded to the required breadth by heat. If they are required larger than what can be had in this way, they are added to with planks, warped to the proper shape and joined together with wooden pegs. The seams are afterwards stuffed with hemp and gum damar, which renders them perfectly water-tight. The boats for the wet season, and the majority of the trading boats, have houses built upon them for the accommodation of the family: they are a kind of ark, to which they betake themselves during the floods.

At Pnomb Pinh the present Cambodian population of the country is said to number about six hundred thousand. I doubt very much, however, if the number is so great. The Cambodians are a well-built muscular race—the average height of the men I consider to be about five feet seven inches, and the women five feet two inches. The Cochin-Chinese settlers are a small muscular looking race.

I was unsuccessful in obtaining types of the Malays, who, on account of their strict Mohammedan principles, object to pictures. The Malays are a numerous race in Cambodia, and are scattered along the coast and on the banks of the Mekong river in settlements numbering from fifty to eight hundred or one thousand families. Their traditions say that they have been in the country since the time of the building of the great temples, and that a Malayan king, named Mahamet, once

reigned over Cambodia. It seems clear, however, that they have been in the country for centuries—they have lived apart from the Cambodians, adhering to the Mohammedan faith ; and by marriage and other practices keeping themselves a distinct race. In every instance when I met them in my travels, whether on the shores of the Great Lake, or on the banks of the Mekong, or at Kampot, I found they could converse in their own language as it is now spoken in Malacca, Penang, and Singapore. They are, however, unlike the natives of the archipelago—they are a taller and more athletic looking race, and their chiefs boast of their Arab descent. From the settlements of the Cambodian Malays occurring along the coast, and on or near the banks of the Mekong river, and from the fact of their being a maritime race, I think the inference may be fairly drawn, that an early tide of emigration brought them to the country.* M. Fountain, in his journal which was presented to the late M. Mouhot, says, in writing of the savage tribes east of the Mekong, "I was astonished, after a little study of the Malayan, to find in that language a number of Giaraie words, and many more bearing a strong resemblance to words in that dialect. The resemblance of the language of the Thâmes now in Aunam to that of these tribes, leads me to believe that they must have all sprung from the same root." The late M. Mouhot endeavoured to discover some traces of the Jewish migration among these tribes, to confirm the suppositions of the "abbé Jacquenot" concerning them. In this, however, he failed, as the religion of the Thâmes offers no further proof of Jewish origin than does that of the Mohammedan creed of Malays of Malacca. I think, judging from the similarity of language and the fact that these savage races practise circumcision, and reverence the name Mahomet, we may conclude that they are offshoots of the Malayan race that are found on the banks of the Mekong river.

* "Travels in Indo-China, Cambodia, and Laos", vol. i, p. 29.

CAMBODIAN MALAY MALE

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XXII.—*On the Probability of a Bone Age.* By GILBERT MALCOLM SPROAT.

[*Read July 9th,* 1867.]

I SHOULD not be surprised if a "bone" sub-division of the older stone age were found necessary to describe a somewhat earlier period than the real stone age—a period characterised by the general use of bones and shells by men over an extensive portion of the surface of the earth. It is not improbable that a "bone using" people once lived on the coast of Great Britain and on the north-western shores of the continent of Europe. The perishable nature of bone, its lightness, and the encroachment of the sea on places where the supposed people may have lived, may account for the absence of many important bone instruments in the "finds" that are now made. Though probably there never was a time in which either bone, or stone, or iron, was universally and exclusively used, yet, I think, a "bone age," in some parts of the world, and perhaps over a great part of it, must naturally have preceded an age of stone. Savages can get bones everywhere—bones, too, of diverse sizes and shapes facilitating their manufacture—but they cannot obtain flint or obsidian in all places. A good sized fowl or fish, before the horns of animals could be procured, would supply the savage with a number of fish-hooks, gimlets, arrow-heads, and other instruments. As long as he could get bones, and they answered his purposes, he would not be likely to use instruments of stone. I wrote an account, in the *Transactions* of the Ethnological Society for 1866, of the ant tribes on the west coast of Vancouver Island. From a careful observation of the arts among these savages, I am tolerably certain that no other materials than bone and shell were required by them for making their tools and weapons down to the time when iron was brought amongst them—say within the last one hundred and fifty years. They used bone and shell tools, and bone fishing and hunting instruments, long after they had a knowledge of iron—as lately indeed as a few years ago—and at the present time the mussel-shell adze used in canoe-making is preferred, even by the young men, to one of any other material, and to the best English and American chisels. So in felling large cedar trees, and in other heavy work, until I took among the people the admirable woodman's axe used in America, they found their bone chisels more useful than any small handled instrument of stone or iron, as

the bone tool had the requisite toughness, bluntness, and penetrating power for such work, and indeed generally for working cedar wood for their special purposes. These savages had a few stone and copper instruments—the latter not smelted or moulded—eighty or ninety years ago, when first visited by Cook, and probably earlier; still, the bone instruments have not even yet been superseded. Ground stone chisels are found among them at this day, but the Indians never describe the utility of these chisels, and produce old bone instruments for every purpose; on being asked what they used before they had English iron or steel tools, I do not think the Ahts either manufactured or used these stone instruments. Those found among them by Cook and other travellers were probably obtained by the Ahts in trade, or as curiosities from the Indians inhabiting the coast of the mainland farther north, who originally or anciently themselves perhaps a "bone-using" people, had been forced by the comparative scarcity of cedar in their district to make stone instruments for cutting harder trees. These Northern Indians are very skilful in working stone; their stone weapons and instruments are as well shaped and polished as the best specimens of the supposed highest stone age; yet they are fiercer and more uncivilised than even the Vancouver Ahts, though these latter, being destitute of stone, bronze, or iron, would be ranked lower by the prehistoric archæologists. What then is the value of the quality of stone instruments as a test of the condition of a savage people?

In elucidation of the subject of this paper, I will here make a few remarks on the kind of weapons and tools that were probably first used by savage men.

On the sea-shore, to which migrators entering a new country first come, and where, from the convenience of procuring shell-fish and river-fish, they would probably remain, many useful pieces of bone could easily be got, and it is not a certainty that stones could be procured suitable for the manufacture of weapons. The history, probably, was something as follows:—The savage man would seek his food first among the shell-fish on the beach. Shell-fish generally are good to eat, and require little cooking; and not being able to move quickly, they would be an easy prey to the hungry captor.

Soon he would observe larger and more tempting fish, unencumbered with shells, in the shallow rivers and near the shore of the sea; and an early exercise of his ingenuity would be an attempt to make a weapon for their capture. He would probably first throw a round stone at the fish; then, perceiving that a stone would not go through the water to kill them, the notion of a thin stick for thrusting would occur to him. To get

a sharp hard point to this stick the savage would scrape the end of it with a shell, and burn the point in the fire, and finally would employ for this purpose a piece of fish-bone after having captured a fish. Bone, in all parts of the world, would be available for his purpose; stone of the proper description, might be, or it might not.

As in attacking animals or birds, or in war with his fellow-man, the same weapon would be used by the savage, we may suppose that the lance is a very old and common weapon. It is the original of the modern bayonet—a weapon which calls into action the same thrusting principle in the use of offensive weapons as the sharp stick of the savage. The arrow, which would be the next weapon of the savage, is simply a small lance projected by a contrivance called the bow in aid of the arm of the hunter, to whom the idea of the bow would occur, after trying unsuccessfully to kill wary animals and birds, by throwing a pointed stick at them from a distance. It is not, however, easy to form any reasonable conjecture as to what could have so generally suggested to all races of rude men the particular form of the bow as a means of increasing the natural force of the arm.

So much for the first weapons of men *living on the coast.* As regards *tribes living inland,* without opportunities of fishing, the process of the invention of their early weapons probably was generally similar, though perhaps with some difference in the early stages. The inland man probably first tried to kill animals and birds by throwing stones at them rather than by transfixing them with a pointed stick after the manner of the coast man, to whom the possibility of approaching close to fish —say from a fallen tree across a stream or from the bank,—and also the need of a weapon to penetrate the water, would, according to my notion, have almost immediately suggested the use of a lance. As the use of the arrow would soon follow the invention of the lance, the probability is that the bow was first made by savages living on the coast. The inland man, on the other hand, throwing stones at animals in order to kill them, probably first invented the sling as an assister of the throwing power of the arm. Afterwards, by observing horned animals butting, or on some suggestion, he would get the idea of a spear or lance, and in the same manner as the coast man, but at a later time would follow up the discovery of the lance by that of the arrow and bow. The inland man, therefore, except as regards the sling, would almost from the first, as well as the coast man, and for the same reasons, find it convenient to use bones for pointing his common weapons.

This rule, however, of the use of bone for weapons in the

early stages of human history would be subject to modification in countries where flint, obsidian, or some other suitable stone, was so plentiful as to come into competition with bone, or where circumstances had compelled the people to practise stone working.

I would remark here that the offensive *weapons* of prehistoric savage tribes, considered *per se*, indicate only part of their history and condition; a larger part of the life of a prehistoric people may be learned from the description of their *tools*. As in the case of weapons, these tools, over a large part of the world, originally may have been made of bone—an universally and easily obtainable material. Between the history of the weapons and of the tools of savages, however, there is this difference—that the materials used for the tools would not depend simply on the presence in the district of bone, stone, copper, or iron, for the desired instrument, but it would be decided in the case of the tools by the description of the wood, or other substance required by the people for essential purposes, such as making houses, sledges, canoes, and utensils, in constructing which the tools would be used.

On the other hand, a simple quality determines the material for weapons; the power of penetrating is almost the only quality required anywhere by the fisherman, hunter, or warrior in a weapon for destroying life, whether of fish, bird, animal, or man. The Galloway man's leister in the Solway kills a salmon in the same manner as the *milsyeh* or spear of the Aht in Nitinaht Sound; and whether a deer falls by a bullet on Braemar, or by an arrow at Klah-oh-quaht, it is the piercing power of the weapon which serves its purpose in letting out the life. The missile may be a piece of bone, flint or metal—a lance-head, an arrow-head, or a bullet; it may be flung from the hand, or propelled by a bow, or by the explosion of gunpowder—the quality of penetrating the body it reaches, when so propelled, is what is wanted. But no single quality of this sort suffices for tools; cutting is, perhaps, the general quality most wanted, but there must be the power of cutting in many different ways—by axe, chisel, adze, gimlet, or gouge, in order to manufacture even the commonest requirement of a savage. Hence the greater importance of studying the evidence of *tools* than *weapons* in estimating the condition of an extinct savage race. It evidently must make a considerable difference in the kind of tools used by savages, whether the house is built of wood, stone, or mud; the canoe made of bark, or of a single tree, or joined planks; whether the potter's art is known; and whether hard oak, tough fir, or brittle cedar is available for the many purposes to which wood is applied. The Scottish savage

of the old time, probably used the same description of fishing and hunting weapons as the modern Aht, but circumstances might have caused his industrial instruments to be widely different; and those circumstances may have greatly affected his condition.

As already stated, the savage tribes I have referred to, viz., the Ahts in Vancouver Island, have hitherto used almost entirely bone instruments, with a few knives and gouges of mussel, oyster, and clam shells. If with these they can fashion all their necessary offensive weapons, cut down trees, and make canoes and house planks, for what reason should they ever abandon their bone instruments, and laboriously endeavour to form them of a more difficult material—stone? They would do so only under pressure of some necessity, such as a necessity for weightier and sharper instruments. How would this occasion be likely to arise? The range of my personal observation is limited, and I can speak only of these Aht savages above-named, who are known to me. I can see how they would change from a "bone-using" into a "stone-using" people—in fact, I may say that the transitional time among the Ahts approaches. Wood is one of the chief necessities to every community of men, and particularly to savages (though the Esquimaux do without it); and it is worthy of observation how greatly the whole life and condition of a savage nation may depend on the abundance and description of the surrounding flora.

To us the pine is, perhaps, the most universally useful tree, furnishing, as it does, tar, turpentine, resin, lampblack, and many other products, and wood for all sorts of buildings. What the pine is to us, and far more than what the pine is, is the cedar tree, *Thuja gigantea*, to the Ahts. Their condition is closely connected with the presence of cedar trees in the district. Next to the absence of their staple food, the salmon—they would miss most the cedar tree. They produce fire from cedar sticks; they make clothes, houses, canoes, utensils, ropes, fishing traps, and weapons, of this invaluable wood. It is light and easily worked, and owing to the straightness of its fibres, splits readily into boards or poles. Possessing the cedar tree, the bone and shell tools of the Ahts are sufficient for every purpose; but if the cedar trees failed, the whole nation would come to a standstill. The cedars in the Aht district grow scattered through the pine forests, and, according to the statements of the Indians themselves, pine cedar trees for canoes are becoming scarce. They will last, I dare say, for several generations; still, if they should happen at any time to fail, it is evident that the people, not being able to fell nor fashion the tough gigantic fir trees with their light bone instruments, would either have to migrate or

to seek for their tools a harder material in metal or stone. Thus the "bone-using" Ahts, in a century or two, on the exhaustion of the cedar tree, would have to "move on," or become a "stone-using" people. Their houses would be changed, for they could not with bone instruments make the fir tree into broad planks like the cedar; the beautiful canoes would no longer be seen, and shapeless "dug-outs", dangerous to the fisherman, would take their place; in short, the habits of the people probably would be so greatly changed that in the end they might retire inland from the sea shore and become hunters. In pursuing game over the country, these hunters would be more likely than fishermen to find metals; and thus a step in advance might result from the discovery of that civilising material. But if, on the exhaustion of the cedar tree, the savages had no knowledge of a new district to which they could go, and if the interior of their own country were unsuitable for settlement, they would probably remain at their old villages by the seaside, abandon their bone instruments, and hew at the fir trees with the best stone ones they could make. Such might be expected to be the history and condition of the Ahts, two centuries hence, if left to themselves; and such, probably, was the state of the Danish fishermen, whose existence is revealed in the shell-mounds. The people in these old villages once possessed bone instruments, and afterwards, for some reason such as a change of trees, used weapons and tools made of stone; and the transition from the "bone" to the "stone" age may have been so violent as to cause after a time the migration of the inhabitants, in search of a more suitable country; or possibly, their decline and extinction without moving from the places where their remains are now found. I repeat, that the measure of such a prehistoric people's physical comfort and condition would not be the sort of weapons they used—whether bone, flint, or bronze—but more specially the description of the wood that was available for their general wants. A bone-using native on the west of Vancouver Island, with plenty of cedar, is better off than if he had a certain knowledge of iron, but was obliged to use oak or fir. And on this "bone age" hypothesis, why might not men who lived even before the unground-stone age, have been in some parts of the world, with suitable flora, in a less rude state than is generally supposed, in a condition, in fact, as good as the Ahts? How strange if it shall appear that men in that old time, instead of living on a par with the beasts, enjoyed a physical condition superior to that of masses of people in modern civilised countries, and had their slaves, their degrees of social rank, their formal etiquette, their ceremonial feasts, and such moral and religious

characteristics as distinguish the now-existing savage tribes in Vancouver Island to whom I have alluded!

In conclusion, I will add that we may, perhaps, contemplate in the succession of the vegetable kingdom the means used by God for necessitating or encouraging the early migrations of the men who spread first over the world. The notion of seeking a more suitable country would not enter the mind of a savage; he would not move less forced by some imperious necessity. It is pretty well proved that, before the savage will exert his body or mind sustainedly in any direction, there must be a strong pressure from without—not the sort of pressure which kindly human efforts—as of us his more civilised fellow-men—would put upon him, but the gradual, silent, irresistible force of nature, changing completely his external circumstances, and impelling him along the difficult road to civilisation by the alternative of progress or extinction.

XXIII.—*On the Syllabic Characters in use amongst the Vey Negroes.* By H. C. Creswick, Esq.

[*Read July 9th*, 1867.]

I would preface my brief account of the Vey syllabic writing by observing that I lay no sort of claim to a scientific knowledge of philology. My remarks are confined to a mere recital of what I saw and heard whilst living amongst the Vey Negroes.

The art of writing is held in the greatest reverence by all Africans, and nothing elevates the European so high in their estimation as his facility in that art; a fact which, I believe, has contributed much to the influence of the Mahomedan teachers who are all in a greater or less degree conversant with the Arabic writing. The most powerful gue-gues are those containing slips of paper, on which the "mandingo" has inscribed some sentence from his "book"—the Koran; the most efficacious medicine, Arabic words, written with a black substance upon a board, washed off and drunk by the patient!

If this note has the effect of partially dispersing the prejudice which would place the mental qualifications of *all* Negroes on the same level, and that level but little above the instinct of the brute creation, I shall consider myself fortunate in having brought the subject before the Society.

I should not quote the Vey language as one of the most developed of Negro dialects, far from it; though the fact of this tribe having *invented* a mode of writing, which, if it be inferior to the alphabetic, is far higher than the hieroglyphic or symbolic system, should obtain for them a better place in the estimation of enlightened Europe. I have used the word *invented* advisedly, for that really is the corect expression when speaking of the Vey syllabicum; it was a pure invention, whether you accept as true the history told of its origin by Dr. Köelle, or the version subsequently heard by myself from the mouth of an old chief, in whose town I was living. The story told to Dr. Köelle bears on its face such a suspicion of having been invented for the special benefit of the missionary, that I can accord but very little value to the account given by that gentleman. But, however that may be, I will give an outline of both stories.

It has been stated to me that the Vey "book," to use the country expression, cannot date back more than forty years—I believe that fifty would be a very close approximation to the

truth. Certain it is that old men now living, with whom I have conversed, remember the time of its creation; and it is from information received in this manner that I learnt the origin of this, the only native African orthography in existence.

On the banks of a beautiful lake,* situated nearly in the midst of the Vey country, is one of the best and cleanest towns the district can boast, called Mando. Here had been established a trading station, under the charge of the head man of the place, who had many assistants, but two especially trusted. These young gentlemen, it appears, had a greater relish for palm wine than was consistent with their limited means, and, to gratify their Bacchanalian proclivities, did not hesitate to plot a scheme for robbing the store of small articles from time to time. Now when a Vey man, woman, or child makes up his or her mind to rob you, they show an amount of ingenuity that puts into the shade the cleverest candidate for colonial emigration that ever stood at the Old Bailey bar.

This was the scheme: the one boy who had access to the goods would take a pipe or a leaf or two of tobacco and hide it in a part of the house where his accomplice could go without raising suspicion; and, to avoid *talking* of the theft, which might be overheard, he made certain marks in the dust to indicate where the plunder lay hid. The other lad would then proceed, having secured the means of purchase, into the bush where the coveted luxury was to be obtained, and buy and drink his share. The remainder he would hide away somewhere in the path, as it was not possible to bring it into the town without question and subsequent detection; so, after depositing the gourd containing the wine in a secure place, he would make other marks in the sandy path to point out to his companion where he would find his portion of the wine.

So these ingenious youths went on elaborating until they had a regular system of conveying intelligence by means of symbols, which, in process of time, was still further developed into the present "book," "enlarged and revised" by many subsequent persons.

As may be readily imagined, not every Vey man understands the writing, although a large number of the principal men amongst them do, and even a few women. There are, moreover, schools where the children are regularly taught it by means of small black boards and chalk. The history of the foundation of the symbols, as well as some records of wars, etc., of about twenty-five years ago, are preserved in Vey writing. On the large silver ornaments worn by the ladies of rank pro-

* Lake Bisama.

verbial expressions in the Vey language are engraved in these characters.

I ought to mention that this account was corroborated by other parties besides the individual who was my first informer, and I have every reason to give it credit. The following is the story related by the so-called inventor* to Dr. Köelle :—"About fifteen years ago I had a dream, in which a tall, venerable-looking white man, in a long coat, appeared to me, saying : 'I am sent to you by other white men.' Doalu asked : 'What is the object for which you are sent?' The white man replied: 'I bring you a book.' Doalu said : 'This is very good ; but tell me now, what is the nature of this book?' The white messenger answered : 'I am sent to bring this book to you, in order that you should take it to the rest of the people. But I must tell you that neither you nor anyone who shall become acquainted with the book are allowed to eat the flesh of dogs and monkeys, nor of anything found dead, whose throat was not cut ; nor to touch the book on those days on which you have touched the fruit of the to-tree (a kind of very sharp pepper)'". . . . . "Though Doalu had been well instructed in his dream, yet, as he told me, in the morning he did not remember all the signs which had been shewn him by night. Therefore, these are his own words, he and his friends had to put their heads together in order to make new ones ; and on this ground we are fully justified in speaking of a real *invention* of the Vey mode of writing."

Such is the story related by Dr. Köelle in his very carefully constructed grammar of the Vey language. Now, as he visited the country in 1849, and Doalu related his "dream" as taking place about fifteen years previously, it would place the date of the invention some thirty-three years ago. It was suggested to me by the Rev. H. Venn, of the Church Missionary Society, that *both* accounts might be true ; inasmuch as the youths, having a slight knowledge of the characters, may have used them for the purpose described, and the circumstance might, in some parts of the country, have been erroneously connected with the real invention. But I am not inclined to adopt this view of the matter, from the simple fact that from the information I gathered I should not have been justified in placing the date of the invention later than about 1815, whereas Dr. Köelle's account would make it about 1834 or 1835.

Again the idea of the young thieves using characters for the sake of secrecy, which were better known to their elders than to themselves, seems to be very improbable. Their entire in-

* Doalu Bukere.

VEY SYLLABARIUM.

ā - -
ă - -
Ba -
Bă - -
Bah
Bau -
G-bar -
Baugh -
Bē - -
G-bay -
Bel - -
Bor -
Biŭ - -
Beg -
G-bea -
G-be -
Boo - -
Bo - -
Boy or boe
Bol - -
Bor -
Bru -
Chā -
Che -
Dā - -
Dā -
Dn' - -
De - -
Doe -
Dor -
Du - -
E - -
Ern -

En - -
Fa - -
Fe - -
Fā - -
Fo - -
For - -
Gā - -
Gāh -
Gar -
Gē - -
Gĕ - -
Goo -
Go - -
Gor -
Gu - -
Hā - -
Hă - -
He - -
Ho - -
Hor -
Hu - -
Jā - -
Jă - -
Je - -
Jeg - -
Jo - -
Joo - -
Ju - -
Kā - -
Kay -
Ka - -
Ke - -
Ko - -
Kor -
Kea -
Khum -

Kahn -
Ku -
Lā - -
Lă - -
Law -
Lĕe -
Lō - -
Loo - -
Lu - -
Lo - -
Let - -
Mă - -
Mā - -
Me - -
Moo -
Mo - -
Nā - -
Neagh -
Ne - -
Neg -
Nee -
Nō - -
Nu - -
Ngo -
Oh - -
Pā - -
Pă - -
Pae -
Pai -
Pau -
Pavu -
Pe - -
Pec -
Po - -
Por -
For R see L.
Sā - -

Sa - -
Se - -
Sir - -
So - -
Tā - -
Ta - -
Te - -
Teg -
To - -
Tor -
Tu - -
Vā - -
Ve - -
Vo - -
Wā - -
Wă - -
We - -
Weg -
Wo - -
Won -
Wu or u -
Yah -
Ya - -
Yer - -
Yeā - -
Yaun -
Yaru -
Yeu -
Yein -
Zah -
Za - -
Ze - -
Zo - -

dependence of any European or Arabic source will be at once apparent by a mere inspection of the characters; but will be placed beyond a doubt when we remember that the Vey is not really an *alphabetic*, but a *syllabic* mode, representing by one sign each syllable. The natives usually write as we do, from left to right (though I believe some do so from right to left), and without any attempt to divide words of sentences by points or spaces; though it is common to put at the end of a letter the words "it is done," or "the end." The writing is eminently *phonetic*, indeed, the eye has not so much to do as the *ear* in reading a Vey letter. I was always reminded of my early days of short-hand, for it is only by pronouncing slowly syllable by syllable that a native seems able to appreciate the meaning of his correspondent.

It is somewhat singular that they have contrived no symbols to express numerals; so they are always written in full, as but very few are acquainted with the Roman or Arabic signs. The enumeration, we might mention, is similar to the Temric, and many other of the African languages with which we became acquainted, in its being quinial. The first five, the tenth, and twentieth having distinct words, but no others.

XXIV.—*A Contribution to the Ethnology of Jeypore.* By JOHN SHORTT, M.D., F.L.S., M.R.C.P.L., etc., Surgeon, General Superintendent of Vaccination, Madras Presidency.

[*Read July 9th*, 1867.]

THE province of Jeypore, under the supervision of the Madras Governor's agent at Vizagapatam, is said to comprise an area of 11,000 square miles, 9,000 of which are above the Ghauts, and 2,000 below in the plains. This province is now divided into six regular districts, in addition to a wild tract in the south, scarcely explored, and inhabited by a rude barbarous class of people, over whom the rajah has no control, although they are attached to him, and owe him military service when called upon. They pay no tribute, but, during the feast termed "Dusserah,"* they bring him annually as offerings some of the products of their districts.

Jeypore is tributary to the British Government, paying a small *prishcush*† of 16,000 rs. annually, whilst the province realises 150,000 rs. The British Government, by means of their agents, exercise entire control over the criminal and judicial departments, and a general control over the province—the revenue arrangements being entirely under the management of the rajah or zemindar.

In 1860, the zemindary was registered in the name of the present proprietor, as the eldest son of the late rajah, Sri Vikrama Deo, who died on the 10th September of that year, when he was installed on the *ghuddie*.

The rajah of Jeypore belongs to an old and ancient race, and is descended from the kings of Juggernaut; his ancestors are traced with precision to several centuries back. The family belongs to the caste termed Kshatnya. The present ruler is about thirty-five years of age, and stands about five feet nine inches in height, of a light coffee-coloured complexion,‡ and with nothing remarkable about his personal appearance. He wears a full head of black hair, which is combed back over the crown and tied on the left side of the head.

This province possesses a peculiar interest to the ethnologist from the fact of its having been the head-quarters of every species of human sacrifice, viz., Menah, Infanticide, and Suttee.

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* A ten day festival held in honour of Durguh, otherwise termed *Kali*.
† Tribute. ‡ Colour between 28 and 29 of Broca's table.

The first was only discovered in 1836 by a Mr. Russell, of the Madras Civil Service, chiefly among the Khonds, but at the same time it was found that the practice was familiar to others, more especially to a class of carriers called Brinjaries; and on particular occasions it was practised by most of the Hindu chiefs, and occasionally by Ooryahs and Khongars of the province. In addition to the above, witchcraft and sorcery were rampant, and well-authenticated instances are related of women who were put to death in various ways, not many years ago, for these supposed crimes.

Like other parts of India, the population is divided into numerous caste divisions, each having a dozen or nine subdivisions; in fact, cast is the bane of India, every trade or occupation forming a caste of its own with minor subdivisions. Among the Brahmins alone there are fifteen subdivisions—these people are numerous in the province, and are generally well to do, forming the principal residents of villages, holding lands or villages in tenure. There are not many distinctions among the subdivisions, which chiefly constitute some minor differences in their social and general ceremonies; their habits and marriage ceremonies are much like those of the Brahmins of the plains, with this distinction, that the great majority of them in Jeypore eat flesh meats, such as those of the pea-fowl, sambar, spotted deer, jungle-sheep, fish, pigeons, wild hog, etc., but refuse the domestic fowl and beef. These people, with the village Curnums, are the only educated classes in the province.

There are some ten subdivisions which belong to the *Paiks*, or fighting men—they are not so numerous as they used to be —when they constituted the army of the rajah they were paid either in money or by grants of land; but, as the number of Paiks is greatly reduced, they have turned their attention to other and more useful trades. There is nothing worthy of notice as regards their domestic and social habits, except that their widows are not allowed to marry again, but are taken in concubinage by the younger brothers; this practice exists also among the Brahmins, Kethres, and Curnums.

There are some eleven divisions among the ryots, and nine among the shepherds; all these classes make themselves acquainted with the use of the bow and arrow; a few with matchlocks; and they are expected to render service to the state when called upon. The artisan class is well represented in every village; many of them are rude workers in silver, gold, iron, brass, etc.; their social customs are simple; they have no marriage ceremony, the choosing of a wife consists in making the bride's relatives drunk; the joining of the friends of the young woman in a drunken debauch is a token of assent, and a

refusal, as dissent, to the proposal. Should the drinking bout prove auspicious, the bride is presented with a cloth, and, if in circumstances, the bridegroom places a silver ring, termed a *Cugala,* around her neck and takes her home; but, should any disputes occur during the debauch, the bridegroom watches his opportunity, and carries off the girl by main force; the contract so formed is very loose, and chastity is not observed; the woman considers herself at liberty to go and live with any man she may fancy. Children do not seem to be in their way when they take to such erratic fancies, but are left behind to be taken care of by their late husband. It seldom occurs that a woman is seduced by another; generally the woman herself takes a fancy, and goes of her own accord.

In addition to the Brahmins, the Khestreas, and the Bhatoos, Jungum, and Dhakur, wear the sacred thread or *poieta.* Of the two last classes the Jungums are an inferior class of Brahmins, and act as priests in the absence of the regular Brahmins, and blow their silver horns before the rajah on state occasions; whilst the Dhakurs are illegitimate children of the Brahmins. At one time a good trade was driven by the rajah issuing licenses to the right to wear the sacred thread or *poieta,* which was sold to all classes except Dhers, when they chose to purchase the privilege for 10 or 12 rs. But this has been put a stop to of late years by the agent, and now anyone that chooses may wear it without let or hindrance.

There are several tribes of low caste ryots about the Maliahs of Jeypore, who permit their widows to marry, specially those who have lost several husbands successively.

The Gudahas and Parenga Gudahas are the only castes that can carry the palkre.* Every caste is accustomed to carry burdens, such as the banghy, but they cannot manage to foot it with the palkre without kicking at each other's heels. The palanquin-bearers are by no means a numerous class. The banghy consists of a stout stick or bamboo placed across the shoulder, with a weight slung across at either end, with which they move off at a jog trot; the weight so carried averages from sixty to seventy pounds. The regulated weight authorised by the Commissariat Department in the Government service for a head cooly is thirty-five pounds, but these people will carry double that with ease. From childhood they are made accustomed to carry the banghy.

I cannot do better than give here a list of the principal castes, with the number of subdivisions in each :—

* Palanquin.

		Classes.	
1	Brahmins	15	
2	Kethre	16	
3	Curmuns	11	Writers.
4	Parks	10	Fighting men.
5	Gows	9	Shepherds.
6	Konda	2	Brass workers.
7	Tela	1	Oilmen.
8	Ryots	24	Turners.
9	Keots	Numerous	Fishermen.
10	Koostars	Do.	Weavers.
11	Mallas	Do.	Gardeners.
12	Soondees	2	Liquor manufacturers.
13	Soonaree	1	Goldsmiths.
14	Komatee	1	Grocers or bazaar men.
15	Bhatoo	1	Singers.
16	Jungums	1	Low Brahmins.
17	Dhakurs	1	Illegitimate children of Brahmins
18	Coorubars	1	Pot makers.
19	Gudaba	2	Palkee bearers.
20	Moondaree	2	Barbers.
21	Doba	2	Washermen.
22	Dombs	6	Pariahs (Ryots).
23	Medthree	1	Mat makers.
24	Ghanshee	4	Horse keepers.
25	Lohara	3	Iron smiths.

26 A few Mahomedans, who are chiefly foreigners and traders or merchants.

27 There are seven Khond Mootahs in Jeypore, and in all of these the Menah or human sacrifice used to be practised. These are "Sirdarpur" "Godairy", "Bijipur", "Chandrapur", "Prayabiji", "Bussencuttack", and "Durgi". In addition there is an itinerant tribe of carriers known as "Brinjaries", and a very small floating population of small tradesmen from the low country who frequent the province.

The most interesting of the tribes I met with in Jeypore were the Punjas, a large class of ryots, who not only cultivate the soil, but carry burdens, and in days of yore performed military service to the state by fighting battles. The majority are nicely featured, more especially the men; the women are uncouth-looking, though many of them have a pleasing aspect, and some very few may be termed good-looking. The features of the men are regular, being slightly flat across the face, with a well-formed and prominent but slightly narrow frontal bone, mouth small, teeth white and regular; hair of head dark, full-grown, combed back, or simply gathered, thrown back, and knotted on one side, immediately behind the right ear; moustaches scanty; beard straggling; no whiskers. In *physique* they are well-made, with proportionate and well-rounded limbs; colour of a light copper hue.* Both men and women are excessively fond of ornaments; the latter will carry from fifteen to twenty pounds of brass about them in the shape of ornaments, and the men are

* Between 28 and 29 of Broca's table.

not far behind in this respect. Their fingers, forearms, arms, neck, ears, nose, ankles, and toes are literally covered with brass ornaments of various kinds and shapes, under the weight of which they totter, yet still they wear them. The chief point of attraction among the women is a large appendage in the shape of an earring, which is fastened or passed through the centre of the rim (fossa scaphoidea) of each ear, consisting of six or eight coils of brass wire, one-eighth of an inch thick, and six inches in diameter, which gives them a very singular appearance. In addition, several other kinds of ornaments are pendant from the ears; they wear small nose rings, and on the fore part of the head a kind of beaded frontlet, formed of glass beads and leaden tubes strung together and tied on; this extends from an inch above the eyebrows to the coronal suture, and is fastened behind under the hair; the hair is parted in the centre, combed back, and tied in a loose knot, or it is plaited and allowed to descend down the back in one single plait, being ornamented with various brass appendages.

As a class, they are of a quiet peaceable disposition, employing themselves in cultivating the soil, carrying burdens as coolies, and other such work as appertains to ryots generally. They are somewhat servile, but humble, and willing to do what is required of them. With the exception of their excessive taste for ornaments, the men do not differ from other natives in their dress, wearing the usual *puggree* and *dhothee*—the former only when in a position to afford it. The women are restricted to the use of a particular kind of cloth, which they manufacture for themselves from the bark of a species of nettle, which they name *careq*. It is stouter than canvas, aud very durable, and is tied about the person in two pieces—one is encircled and tied round the waist, which descends down to the knees; the other has one end tied round the waist and passed across the arms and knotted over the shoulders, with which they can cover their trunks pretty well—this is the only kind of covering used by them. They are strictly prohibited from wearing cotton cloths. Their huts are wretched scraggy buildings of a circular form, and the opening or door is connected with their cowsheds, which are attached to them, surrounded with filth of every description. Both from poverty and caste or tribe prejudice, the women being confined to the use of the particular *careq* cloth, exposes them greatly to the cold, which is extreme during the winter months—the thermometer descending to 45° at night. To avoid the inclemency of the weather, they build themselves winter houses—these are about three feet in height, and six inches in diameter, much resembling a hen coop, built of sticks, and the outside thickly

coated with clay, and washed with red earth; the inside, as well as the floor, is thickly lined with straw, grass, etc.; the inner portion of the hut does not admit of an adult stretching himself at full length, but it is very warm and comfortable; there is no other opening but a small door, through which one is obliged to wriggle to enter. Men, women, and children crowd into it; from the position they are obliged to maintain, they must be cramped, but they are well accustomed to it. They have cattle, pigs, fowls, dogs, etc., of which they seem fond. In one village I saw a domesticated peacock, and in another a couple of tame wild hogs. They make use of animal food, even the cow; they live on rice and other dry grains, grow a few country vegetables, of which the pumpkin is the chief, which frequently supplies them with their chief vegetable during the season; it is also cut up, sun-dried, and stored for other times of the year. Their language is a commixture of Telugu and Ooryah. They have no written language.

Of various festivals observed by the people of this province, that termed *Boliyathera* deserves notice, from the fact that the rajah holds the Purgah tribe to afford amusement to all, himself included. This is done by causing the Purgahs to be exhibited in a state of nudity, and making them assume positions on all fours, with their nates painted white, and the arms deep red. Only one at a time is exhibited, and is carried about by men of his own caste quite conspicuously on their shoulders, the bearers having their nates and penis painted coal-black.

During the *Chaither Purno*, or festival in the first month of the new year, men and women assemble, a line of demarcation being drawn between both sexes, facing each other at a distance of about twenty paces, when they amuse themselves by singing duets, commencing at 8 p.m., and terminating towards morning. This festival is kept up for a month; and during its celebration the women often make demands on the men to go into the jungle and chase the deer, elk, or wild boar. Should any of the party return unsuccessful, the women scout them, and dose them with a mixture of cow-dung, frequently throwing the same in their faces. To the successful sportsman a contrary course is pursued, by decking the game with garlands of flowers, and by singing praises and repeating his skill and achievements as a huntsman.

The lower orders or castes observe the festival by the men and women mixing promiscuously, and taking bedfellows as their choice directs—jealous feelings give way during this season to old and cherished customs, by which long desires are gratified.

There are some thirteen different festivals observed during the year, which require more time and space than this paper

can afford to detail. I append to this paper the weights and measurements of twenty-five men—a few men taken from each village, comprising chiefly those who came forward as coolies to carry my baggage during my travels in Jeypore. I also append the weights and measurements of seven men of the tribe called Doms, who are numerous in the province, and are considered the pariahs or lowest outcasts, yet they have distinctions and minor subdivisions among them—they are reported to be of very idle habits and extremely lazy, seldom keeping to any occupation for any time, and as ryots they are considered worthless; they are strongly addicted to thieving. As a body, they are fine-looking, with a tallish appearance. Their huts are of the same description as before noted.

We next come to the Khonds, who are an independent and savage race, adhering to old superstitions, and offering *meriah* or human sacrifices. They have a well-formed globular head, with an expanded, and in some inclined to overhanging, forehead, large and expressive eyes, wedge-shaped countenance, prominent molars, flat nose, with wide-open nostrils, thick lips, and sharp chin, having a well-covered black and coarse head of hair, with a scanty moustache and beard. The Khonds generally go bare-headed, having simply a piece of cloth wrapped round their waists about which they are not careful. The women have the same features, with a feminine cast of countenance, and have a short piece of cloth wrapped around their bodies once or twice, and the rest carried across the shoulders to cover the breasts. The arms and legs, from the knee downwards, are naked; they are pretty well covered with ornaments of brass, studs, glass beads, etc. The village generally consists of two streets, each with a double row of huts, one of which is occupied by themselves, and the other by a tribe named Pardi, of low caste, and who are weavers by trade. Their huts are indifferently built of wattle and daub, and the roof thatched with grass. Most of the villages are surrounded by a stout plaiting of bamboo fence, and in some few places well-stockaded, in one part of which their cattle are folded, and the other portion is converted into a vegetable garden, in which they grow vegetables, chillies, tobacco, etc.; outside, where a stream exists, rice is grown. In the jungles the trees are rudely felled, and oil-nut, dholl, cotton, etc., cultivated. Each family raises a sufficiency to supply their immediate wants. The men go about constantly armed with a tangee, or axe, in the use of which they are very expert, as also of the bow and arrow, which some carry. These are their chief instruments of defence from their enemies as well as the wild beasts that infest their neighbourhood.

The chief interest which clings to these people is their at-

tachment to the barbarous rite of offering up human sacrifices under various names to their gods. The ceremony of such sacrifices, now familiarly known by the name of *meriah*, differs somewhat in the several localities in which it used to be practised. Under these circumstances it would be necessary to detail here the several processes by which the *meriah* is offered up.

The Khond faith alleges that the human race was sinless, naked, and in social companionship with *Bona Peimu*, the supreme deity, and in the enjoyment of peace and prosperity. This was interrupted by the malicious instepping of *Tari Peimu*, the female companion he had created, by sowing dissensions among them, tempted man to sin, and thus he forfeited his original innocence and became subject to disease and death; the quiet of the earth was changed to wildness and sterility, and the god and goddess contended with each other for superiority over the human race. This resulted in a division—one portion of the people worshipping *Bona Peimu*, and the other *Tari Peimu*. Although *Tari Peimu* is said to be the source of all evil, yet she can impart every form of earthly blessing to her followers, not only by obstructing the good that flows from *Bona Peimu*, but also by her own individual act. To her is attributed the cause of the pains in childbirth in women, and it is said that she once existed on the earth in the form of a woman, and was called *Umbala Bilee*. She was the means of introducing order, agriculture, and other blessings to mankind, and the fable runs that on one occasion, while she was preparing vegetables for curry, she accidentally cut her fingers, and on the blood from the wounds trickling on the barren soil, it was immediately made fertile. On this she summoned her followers, pointed out the fruitful change, and desired that she should be cut up to complete the transformation which a few drops of her blood had effected. Her followers, who idolised her, refused to comply with her wishes; and, to satisfy her in a measure, they determined to purchase a victim for the purpose, and this it is believed originated what is termed a *meriah*, *takki*, or *kiddi* sacrifice.

Another version is as follows. The Khonds believe that *Tari Peimu*, the earth goddess, has punished them with famine for not continuing the human sacrifices hitherto carried out. They believe in a supreme being, who is the god of light, or of the sun, who created a female companion for himself in the beginning, and she was called *Tari Peimu*, eventually *Boomi Davee*, or earth goddess, and who became the source of all evil. Subsequently it is said the earth itself was created, and that this supreme being, who was recognised under the designation

of *Bona Peimu*, had occasion to be enraged with *Tari Peimu* in consequence of her having refused to render him some personal service; on which he resolved to create man out of the earth, who was to pay him homage, and for the existence of man all the comforts necessary were created by him. On mentioning this, his intention, to *Tari Peimu*, she became enraged with jealousy, and endeavoured to prevent the accomplishment of this work, but her efforts only tended to alter the order of creation. The supreme deity, or *Bona Peimu*, threw a handful of earth behind him for the purpose of creating man, but *Tari Peimu* diverted it aside, and, to her astonishment, trees, herbs, and all kinds of vegetable life sprung from it. Thus, it is said, she interrupted three other handfuls of earth in the same way; but, notwithstanding her attempts, which proved futile, fishes of the sea, fowls of the air, and beasts of the field were formed. Indignant at *Tari Peimu's* obstructions, *Bona Peimu* seized her hand, so as to prevent her from interfering, and cast a fifth handful of earth on the ground, and immediately the human race sprung up. The goddess, then placing her hands on the earth, said, "Let those you made exist, but you shall create no more." The Deity then took the sweat from off his body, and scattered it around him in the name of all that he had created, whence, they assert, originated the source of love and sex, and the continuance of the species.

The benefits resulting from the *meriah* sacrifice were confined originally to those who followed up the practice, but the benevolence of the goddess extended them to all mankind; so to this day it is believed by these deluded people that the well-being and responsibility of the world depend on them entirely, and their fulfilment or failure of the practice will result accordingly in good or evil to the whole universe. Such is supposed to be the origin of this brutal rite, with which the followers of *Bona Peimu* are taunted and are called fools for not following so excellent an example. The latter retaliate that the *Tari Peimu* people devour human flesh to deprive the tiger of its food, under the false impression that they worship and obtain the favour of their gods. At the same time the followers of *Bona Peimu* are equally cruel in the carrying out of female infanticide, the legend connected with which is thus related.

Bona Peimu is reported to have said that, as by creating one woman as a companion to himself, the world has suffered by her; therefore, as many women only as could be controlled, should be reared. As a tribe, the Khonds are an hospitable, free and generous race, possessing many virtues, and consider it a sin to treat a guest or stranger inhospitably, or to forsake a guest or violate a pledge of friendship, or an oath, promise,

established law, custom, or the denial of a gift running into debt, evading war when their services are wanted, and the betrayal of a public secret—the punishment of such crimes, it is said, will follow them to the next generation, when they will inherit disease, poverty, imbecility, and prove otherwise worthless when born again. Their chief virtues comprise killing a foe in war, death on the battle field, and becoming a victim to the *meriah* offering made to the earth goddess.

It is invariably considered absolutely necessary that the victim should be a *bonâ fide* purchase. The value of a *meriah* ranges from 10 to 200 rs., otherwise he should be the descendant of a victim, or he should be an offering made by the parents when young, in the fulfilment of some vow—the victims may belong to either sex, but for a time they must be nursed and petted in the village. He or she generally becomes the guest of the headman of the village, and is particularly well cared for and indulged in every way. If an adult he is imprisoned for fear of escape. From being dedicated to the goddess, he is reverenced and treated with much affection and kindness by the whole village. The sacrifice is carried out during the presence of sickness, misfortune, or murrain in the village, when the *meriah* is led out for slaughter. Two weeks prior to the appointed time, the inhabitants of the village assemble, and the *janni*, or priest, prays over the victim, announcing the fact of the intended celebration of the rite to the goddess at the appointed time; the head is shaved; and for three days prior to that of the sacrifice the whole of the villagers assemble and keep up one continued riot of drinking and debauchery. Drinking, dancing, eating, and other revelry, terminate the first day. On the second the victim is carefully bathed and dressed in new clothes, and brought out in a grand procession with much parade and pomp, accompanied by music, singing, and dancing, which proceeds to the Meriah grove, a large forest in the vicinity, contiguous to a stream or river—these are called sacred groves, and are carefully protected from trespass by the wood-cutter. It is reported to be haunted, which of itself is sufficient to keep off intruders. In the midst of this grove a stout stake is driven into the soil, and to it the victim is fastened, seated, and anointed with ghee, oil, and turmeric, decorated with flowers, and worshipped during the day by the assembly. At nightfall the licentious revelry is resumed, and on the third morning the victim gets some milk to drink, when the presiding priest implores the goddess to shower her blessings on the people, that they may increase and multiply, prosperity attend their cattle and poultry, fertility their fields, and happiness to the people generally. The priest recounts the origin and advantage

of the rite, as previously detailed, and concludes by stating that the goddess has been obeyed and the people assembled. The victim now cries, and curses every one, which is a source of much joy to the people, not perhaps to parents or relatives, should any be present, whilst the janni himself weeps over his victim. Some more tender-hearted individual in the crowd may wish to know why such a cruel rite was ordained. The goddess is now supposed to descend on the janni, and he desires the crowd to desist from crying, and bids them reply to the weeping victim, "It is not our fault, but that of your parents who sold you." "What is our crime?" "The Boomi Davee demands a sacrifice, and it is necessary for the world; whilst all creation suffers are you to be exempt?" "When the meriah sacrifice is offered repose will be given to the world, and the victim will be a god by the favour of the gods." Sometimes some of the assistants endeavour to excite the pity of the priest by various sayings in favour of the victim, as to how he was petted and pampered like a child, carefully fed and taken care of, he being in ignorance of his intended fate. "Oh! friends, look on him as you cry, and do not kill him." Other softening expressions are recited to excite the compassion of the multitude. After the mock ceremony, nevertheless, the victim is taken to the grove, where the sacrifice is to be carried out; and, to prevent resistance, the bones of the arms and legs are broken, or the victim drugged with opium or datura, when the janni wounds his victim with his axe. This act is followed up by the crowd—a number now press forward to obtain a piece of his flesh, and in a moment he is stripped to the bones. The head, entrails, and bones are carefully protected till the next day, when they are burnt, and the ashes collected and scattered over the fields. Occasionally the victim, after having been bound, has hot brands applied to his body; he is thus tortured to make him shed tears, in the belief that a fall of rain will descend. He is kept in a state of suffering till next day, when he is hacked to pieces. This brutal murder, as practised by the Khonds, was only discovered in 1836. The ceremony, if such it may be called, is always carried out on a Sunday to several deities under various appellations.

Of the Hill Tribes there are two classes who practise human sacrifice after this manner, and they are recognised by the names of "Kotaya" and "Jatapu Rodulu," or Khonds. The former propitiate the female deity, termed "Sankari" (supposed to be "*Parvettu*," the wife of "*Siva*.") Here the victim, when taken before the god, has rice, coloured with turmeric, thrown over his head, whilst he is kept under the influence of opium. His every wish is granted, and he is allowed to cohabit with

any woman he may fancy in the village. The mode of procedure consists in first cutting a hole in the victim's stomach, and the idol is bathed with the blood that flows. One of the villagers officiates as priest on the occasion; the crowd then rush at the victim, and cut him to pieces; each one carries off a piece of the flesh to his own home or village, for presentation to the village or household deity. This is usually an annual ceremony, and terminates with a single victim; and the practice prevailed in Jeypore, Bustar, Chinna Kunedy, Gumsur, Boad, Sanepore, and Dunsfulla.

At Bundair, in Jeypore, the ceremony is called "*junna,*" and consists in the sacrifice of three individuals to the Sun, one at the east, one at the west, and the third in the centre of the village—practised after the usual manner of the meriah. A strong wooden post is driven into the soil, with a narrow pit near it, intended for a grave. To the point of the stake the victim is tied by the hair, whilst his arms and legs are outstretched by the aid of assistants, the body being suspended horizontally over the grave, face downwards. The janni or priest who officiates, advances towards the right, repeating the following prayer:—"Oh, mighty *Manieksero,* this is your festal day, to us Khonds the offering is meriah to kings, janni, and for this sacrifice we have kings and kingdoms, guns and swords. We crave that you partake of our sacrifice that we now offer, and pray that we be protected from our enemies, our instruments of warfare be turned into ploughshares, protect and bless our kings that they may not oppress us." The victim is then decapitated, and the body thrown into the grave. The head is stuck on the stake, either to rot or be devoured by beasts of prey. The knife is suspended to the post till three meriahs are offered, when it is removed with some ceremony. As a rule, meriahs are never offered up in their native villages, but always exchanged into others.

In Jeypore, and one or two other places, meriahs are said to be offered up by the principal Hindu chiefs on public occasions, more especially when war was impending and a battle to come off, the building of a fort, or the re-building of important villages, etc.

Colonel Campbell limits the meriah tracts from 19° 20′ to 20° 30′ N., and from 83° 15′ to 84° 30′ E. But there are localities within these limits where the practice is not known, more especially among the Ooryah communities interspersed through this area. At Ramgherry and Lutchmapore, two victims used to be sacrificed every third year in honour of *Goorbane Thammy,* the goddess. Her residence is said to be some eighteen inches under the soil, or rather her temple is said to comprise a hole

eighteen inches square and three feet deep. Here the victim is placed in irons, and handed over, on the appointed day, to the officiating priest, who gives him a pair of new cloths, and plenty of arrack to drink, till he is rendered insensible, when the irons are removed, and he is forced into the hole, two assistants holding his outstretched arms horizontally. The priest first makes an incision in the back of his neck, and then cuts his throat from ear to ear, the blood flowing to the bottom of the hole, which is believed to be the residence of the goddess. After a while the head is cut off and placed in his lap; the whole is then covered with earth, and a heap of stones raised to mark the spot. On the next occasion the hole is required, the bones of the last victim are removed to make place for the coming one. None but the priest and his assistants are allowed to be present during the ceremony.

Again, in the Pootgadesoo, Lorrobose, Koorkaputta, Thamkah, and Rayagodee districts of Jeypore, male and female infanticide prevailed greatly among the Khonds, originating, in some cases, from poverty, and in others from religious errors or rites. On the birth of a child, the *janni* or *dessari* is brought in and consulted by the parents; the horoscope cast, the punjee or cudjair book being opened, and, after certain ceremonies, the style is fixed into it at random, and the part it enters is supposed to point out the child's future fate; if good is indicated, the child's life is preserved; if evil, it is destroyed. The destruction is carried out by placing the child in a new earthen chatty with some flowers; the outside of the vessel is streaked red and black, and the opening closed, and it is removed to the place indicated by the astrologer and buried, a fowl being sacrificed on the spot. In some localities the Khonds themselves undertake the office of dessari, at others they are men of the Ooryah or other low castes.

The next tribe deserving of consideration is the Brinjary or carrier. They are peculiar in many respects, distinct in character and habits from other natives of India. They are occasionally called gipsies, from their wandering habits, having no fixed home, leading a wandering life, and employing themselves usefully as carriers. Their dress and appearance are singular, more particularly the women, and their social habits and customs distinctive. The men wear the usual *dhothee* and *puggree*, whilst the dress of the women consists of a *choolee*, or habit skirt, with long sleeves, and a petticoat or skirt, hung from the waist in ample folds, and consist of coarse cotton prints of bright colours, and a *saree*, or scarf, of a finer texture, which is carelessly thrown over the shoulders, giving them a rather fascinating appearance, combined with picturesqueness, parti-

cularly when combined with the brass and ivory ornaments and gaudy coloured tassels of cotton with which their arms, ears, nose, neck, ankles, and toes are decked. They have small well-turned hands and feet; their movements are elegant, easy, and graceful, but rendered slow from the quantity of ornaments they wear. The hair is parted in the centre, combed back, plaited, and ornamented with a profusion of silk or cotton tassels. Like most Indian tribes, they are not cleanly, seldom change their clothes till they are tattered and torn, and only renewed by a new suit. Notwithstanding and independent of profuse ornamentation, they possess considerable natural charms, which, added to their graceful movements and elegant figure, render them very interesting. The women are as active as the men in their business avocations; they carry burdens when travelling, chiefly their children, or provisions and utensils. The system of ornamentation is carried out by young and old, one trying to outvie the other, and rendering it difficult to distinguish one from the other. They are an extremely useful tribe. They visit the most remote and hilly regions to transport grain and other commodities to more civilised parts of India. No jungles or wild beasts will deter them travelling. They visit all parts of India, and are to be met with in most districts, having a language, laws, customs, and religion of their own. They settle their own disputes by arbitration, and seldom or ever complain of their fellows. In some districts they are addicted to thieving and thuggery. These vices are chiefly confined to travellers, but they never attempt a similar practice in any station; they more frequently fraternise, but never molest each other. Their own code of laws prescribes punishment for crimes, the verdict of which, when carried out, is never disputed. They exercise the power of life and death among themselves as the most absolute sovereign, and, as a tribe, are bound to secresy whenever the extreme penalty of their laws is carried out. Unchastity is strictly punished with death, but frequently both the man and woman suffer when detected, and their corpses are buried or burned together, and neither the justice nor execution is ever complained of. Their social system is entirely distinct from other natives of India. They recognise no authority; keep aloof from mankind generally; interfere with no one, and allow of no interference with them regarding their laws, customs, etc. As carriers, distance and climate have no difficulties for them, as they have means of communicating and congregating with their own tribes; they undertake engagements ever so gigantic in exporting merchandise, chiefly grain, cotton, oil, seeds, etc., and the same is executed with the

utmost good faith; when once work is undertaken, they never play false. No instance is known of goods entrusted to their care having been robbed. They are looked upon by other classes of natives with a superstitious dread, so that they can traverse the wildest and most jungly tracts with impunity and perfect security.

It is reported that the Bringaries of the Hill districts (Bissein, Cuttack, and Jeypore) practise the meriah sacrifice, as well as those who trade between Nagpore and other countries on the coast.

Sorcery, in all its ramifications, runs rampant among the Jeyporeans. The chief talisman is said to be composed of the body of a small species of musk rat, recognised locally under the name of *Chemree Broussa;* its size is said not to exceed one and a half inch in length. The body of this animal, dried, is inclosed in a case of brass, silver, or gold, according to the means of the individual, and is slung around the neck, or tied to the arm, to render the individual proof against all evil, not excepting sword and other cuts, musket-shots, etc.

2. Various kinds of herbs are carefully collated and boiled, the decoction strained and mixed with raggy meal, made into a porridge, and eaten. Such food is believed to render the system impervious to wounds of all descriptions.

3. A mixture of red precipitate, known by the native name of "*cinderd*", mingled with the juice of some herbs, placed in a hollow bamboo, and carried about the person, is believed to render the individual shot-proof.

4. In the vicinity, on the top of a hill, named Bopelly after the deity said to preside there, anyone that takes a black sheep as an offering, is presented by the presiding "gooroo", or priest, with a small piece of black wood, which is said to possess the wonderful power of protecting the individual from "all ills flesh is heir to".

Witchcraft is strongly believed in by the inhabitants of this province; the village *dessari* is requested to examine his astrological tables, and point out the individual guilty of the crime. The *dessari* will name some poor old woman, who is set upon by the people, and the first act is to extract two of her front teeth, which will ever render her helpless, and disqualify her from practising the art. But her sufferings do not terminate with the loss of teeth; she is beaten cruelly, and otherwise maltreated, and sometimes murdered. All kinds of stories are told of the power these women exercise by their craft. They revenge, by seeking out the individual who offended them, at midnight; and, after getting to the top of the hut in which he is asleep, the witch lets down a ball of thread through a

hole made in the roof for the purpose, so as to reach the body of the sleeper; the other end is placed in her own mouth, and by this means she is enabled to suck the blood out of the body of her enemy. Various miraculous doings are also related; such as removing the bones from the body of any individual, or placing various substances in one's stomach without his knowledge. Their belief in ghosts and spirits does not fall short of their credence in witchery. A female spirit is believed to roam through the town of Jeypore, at midnight, quite naked, with flames of fire proceeding from her mouth, ready to pounce on anyone she may meet. In the matter of witches, chilly powder is frequently used as the test, by applying it to the eyes. If a witch, it is said to be innocuous; if otherwise, a violent inflammation, with smarting, is set up in the organs.

Suttee, or the immolation of the wife on the funeral pyre of her husband, has been an immemorial rite among Hindus, and it was in full force in the province of Jeypore at one time, till it was put a stop to by British justice. The ancestors of the Rajah of Jeypore are said to have made Rayagada their capital; a large fort was erected in it, and established as the head-quarters of the province, and to this day the remains of the said fort are stated to be in existence; on the death of the Rajah Beswanath Deo, one hundred and sixteen of his wives are said to have immolated themselves on his funeral pyre, which spot is still pointed out. Although suttee may be suppressed, in practice, in India, still the desire exists, and is secretly cherished among the more bigoted of the Hindus, but the dread of British power alone, at present, deters the people from carrying out the practice. It is even reported that the present Rajah, in ascending the musnud in 1860-1861, sacrificed a young virgin of thirteen at the shrine of the goddess Durga, in the town of Jeypore, in honour of the occasion, that success and prosperity might attend his reign. If there be any truth in the report, the sacrifice must have been carried out in a very secret manner, so as not to have drawn down on himself the indignation of the dominant powers.

Marriage Ceremonies.—Each class has some trifling difference in carrying out the marriage rite, and the majority seem to marry after the girl attains puberty. Brahmins alone must marry before puberty. When marriages occur before that period, the girl is allowed to remain with the parents and friends until such time as she attains maturity, when she is removed to her husband's house. In no instance does cohabitation take place before this period; but no matter how young the girl may be on her attaining maturity, she is at once qualified to enter on the duties of a wife. They are

married either by a Brahmin or by the village Dessari. Among the low castes, the ceremony is carried out at night by uniting the hands of the bride and bridegroom. The bridegroom generally has to pay some ten or fourteen rupees to the parents of the bride, as the girl's dower. The whole of the tribes enumerated cremate their dead; a few of the lower castes sometimes burn, at other times bury their dead, according to circumstances.

Agriculture.—In a semi-civilised province like Jeypore, agriculture is in a very rude state; the ryots depend entirely on the seasonal showers of rain for water for drinking, as well as for irrigating purposes; a few tribes show some ingenuity in utilising the hill streams to enable them to cultivate vegetables. Rice is the chief product of the province; it is mainly cultivated on plateaus some 2,000 feet above sea-level: frequently the narrow shallow valleys and water-courses formed by the rapid streams, caused during the monsoons, are taken advantage of for growing rice. The higher plateaus, above 3,000 feet, are cultivated with dry grain, as raggy, sammay, oil seeds, pulse, etc.; and, on the banks of streams, small quantities of sugar-cane, tobacco, castor-oil, and in some places wheat, are grown. In some parts, a good deal of jute is cultivated for exportation to the plains for the manufacture of gunnies and ropes.

Land is granted by the dewan on cowl to from three to five years. The cowls are issued in the name of the headman, or some one or two of the principal residents of a village, who are answerable for the kist of the entire village. The villagers are now assembled, and an arrangement entered into with the headman as to how much each ryot will pay, according to the extent of land he may cultivate, and the extent of land each may bring under cultivation is also then settled. The ryots are sincere in their promises, and keep strictly to their word, by paying the kist in kind at the regular instalments. No village accounts are kept, but each ryot has a piece of cord on which he knots his payments; these knots show to him, or he understands from them, how much is paid, and the amount still due. The kist paid is a mere trifle, comprising the value only of seed sown. If one measure of seed is sown, the same quantity is given as kist, whilst the produce from one measure may be a hundred. This is the rule established by ancient usage, and it is difficult to change it now.

For many years Jeypore was scarcely known to Europeans; and although the criminal and judicial control was in the hands of the British Government, it was scarcely exercised till within the last few years; and it was only in 1856 that the

province was, for the first time, visited by C. W. Reade, Esq., the then governor's agent at Vizagapatam, since which time the successors of Mr. Reade make annual visits, and spend from two to three months in the province. The entire control of judicial and criminal jurisdiction is in the hands of British officers. The Mofussil police are slowly but surely being located in the chief towns and villages, with subordinate magisterial officers. An European assistant makes his residence at Jeypore itself; and under the management of the present energetic agent to the Governor, D. F. Carmichael, Esq., and his assistants, crime has wonderfully decreased, and life and property rendered secure, and one may now traverse the entire province with perfect safety. But owing to the pestilential fever that prevails in these Ghauts, they can only be entered with impunity at certain seasons of the year. However, I have every hope that in a few years Jeypore will rival the province of the plains for safety, prosperity, and good order, as soon as the roads now being opened out are completed, and the province has its quota of police, and magisterial officers scattered throughout it.

Much of the information embodied in this paper I have been able to gather during a rapid tour through Jeypore in January last; but I am greatly indebted to Lieutenant Smith, assistant to the agent to the Governor of Fort St. George, in the Vizagatapam, stationed at Jeypore, who kindly placed at my disposal some of his private memoranda, as well as the reports by several officials of the province, and other officers who visited the district, and published by Government, more especially that relating to the Khonds and Brinjaries, was taken from the official Reports. I regret that either on this occasion or in 1855 and 1856, on visiting several of the Khond villages in Orissa, I was unable to take the weights and measurements of the people, in consequence of never being able to get together a sufficient number for the purpose; the people were too suspicious to admit of their weights and measurements being taken by ones and twos,—they would have spread all kinds of reports about my doings, and such would have preceded me in every village, and would possibly have done me harm, so that I had to forego the pleasure, but I still hope to take them on some future occasion. The same remarks apply to the Brinjary tribe.

XXV.—*On the Ethnology of Abyssinia and Adjacent Countries.* By J. Crawfurd, Esq., F.R.S.

[*Read Nov.* 12, 1867.]

The ethnology of so extensive a country as Abyssinia and its neighbourhood is a subject of deep interest, but one respecting which our knowledge is, for the present, very imperfect. To prepare the way, therefore, for a better acquaintance, I now lay before the society such part of a report lately submitted to Parliament as bears on the question. The report is that of Mr. Walter Plowden, and contains the best, the fullest, and the most recent account of Abyssinia that has come under my notice. Mr. Plowden, to judge by his writing, was a man of talent and education, as well as of keen observation. A young and enterprising officer of the Navy, he had first visited Bengal: fortune subsequently led him to Abyssinia, where he resided many years, becoming first a favourite with the then Ras, or governor of Amahara, and eventually with the adventurer who overthrew him, and who calls himself Theodorus, and aims at being the lawful hereditary Emperor, or Lord of Ethiopia. Mr. Plowden's report is dated in 1854, and shortly after he was waylaid and murdered by robbers or insurgents. After residing for many years in Abyssinia, he had been appointed her Majesty's Consul at Massowah, which is the seaport of a slip of Turkish territory on the shore of the Red Sea, and, of course, bordering on the eastern portion of the proper land of Abyssinia.

The following are such portions of Mr. Plowden's Report as directly or indirectly relate to Ethnology, and I shall follow them with a short comment:—

"Northern Abyssinia is a state isolated from the sea and from the civilised world by surrounding tribes of savages, and is fast lapsing from its former condition as a Christian realm, governed by one absolute sovereign, into subdivisions of small tribes, that will hereafter retain probably little of religion or civilisation.

"It is separated also from its kindred province of Shoa by strong and fierce races called Galla, who are independent, notwithstanding the boastful title of King of the Gallas assumed by Sahela Selassie and his successor, whose actual dominions do not equal a fifth part of the Galla territory.

"The country that I name Northern Abyssinia, and which is

inhabited by professing Christians, is about 400 miles in length from north to south, inclining westerly, and 300 in its greatest breadth, which is from north-north-west to south-south-east, that is, from the neighbourhood of Massowah to the town of Avjubay in Godjam, and from Wayhaynee, the limits of the Egyptian dominion in that quarter, to the borders of Effat, belonging to Shoa.

"Its north-western and western boundary is formed by the Pashalic of Sennaar; partly on the west and to the south-west vast forests, frequented by wild beasts, or hot plains inhabited by negro races, exclude Abyssinia from the navigable part of the Blue Nile. To the south, that river, an impetuous torrent, forms its boundary, almost its safety, from the Gallas—excellent horsemen, whose delight is war. To the east and south-east the Gallas of Borona, Wallo, Worahaimano, and Worrakallo, separate it from Shoa. The three last are the stronghold of Islamism; and these are again barred from the sea by the savage Adaiel, by whose hordes, led by Mahommed Grayne, Abyssinia was nearly destroyed, when saved by Portugal and the introduction of fire-arms. To the eastward again, more northerly, other tribes of Gallas called Areya and Azobo still interpose between Abyssinia and the sea-coast: and to the north-east and north various tribes with various tongues, Taltals, Danakil, Shihos, Hababs, &c., everywhere seclude that realm and join the dominions of Abbas Pasha, in the tribes of the Beni-Ameer, ruled by the Pasha of Taka. A circle is thus completed that must somewhere be broken through, either by the Abyssinians themselves, had they the power, or by that nation desiring a free intercourse with them.

"The tribes I have last mentioned, that seclude Abyssinia from the Red Sea, occupy a strip of land along its coast of 70 to 100 miles in breadth; and it is here that the Turkish Government has occupied several points, of which mention shall be made hereafter: and although these tribes were formerly Abyssinians, and still, in many places, as at Massowah, speak the ancient Ethiopic tongue, as they are now completely separated, I shall not include them in an account of Christian Abyssinia in its present limits.

"Setting aside, therefore, this border along the sea, Abyssinia is a range of vast table-lands and fantastic mountains, alternating and varying in elevation from 4,000 to 14,000 feet above the sea level. Deep valleys, the beds of the larger rivers, intersect this in various directions, but these streams, however circuitous their course, almost all finally join the Blue Nile, or Abäi, as it is termed by the Abyssinians. These are nowhere navigable, and a few mountain torrents only, and

when swollen by the rains, find their way to the Red Sea. The abrupt and high ranges from which these torrents descend are seen from the coast at the distance of 80 miles inland, and mark everywhere, as far north as the 16th degree of latitude, the confines of the Christian country.

"The climate, on all the highland, is salubrious: but the valleys, at certain seasons, are rendered dangerous by fevers, particularly the low countries bordering on Sennaar, and these valleys produce the richest crops of grain. The tropical rains fall plentifully at the same season with those of Bengal, from June to September, and the soil, extremely fertile, might, from the variety of temperature at the different elevations, produce almost every article of human consumption. Two large inland lakes exist; the one near Gondar, called Tana, the other, in the province of Tehluderree, called Haik. The former is 60 miles in length, studded with islands, and abounds in excellent fish; singular to say the crocodile, that is found in most of the large rivers of Abyssinia, does not infest this lake, which swarms however with hippopotami. The Blue Nile takes its rise a short distance from this, and after forcing its way through the waters of the lake at one corner, forms nearly a circle round Godjam, the southern province of this country.

"The flat and overflowed lands round the Lake Tana, are kept as pasture for cattle, or partially sown with grain; but they are well adapted for the cultivation of rice, or sugar-canes, which both grow wild; or of indigo, which has thriven in Shaa.

"The cold plains of Waggera and Godjam, and the lofty mountains of Semen, where the blackberry, the hawthorn, and the fir, now usurp great part of the soil, are fitted for all the productions of northern latitudes. The more temperate provinces would probably be favourable to the growth of pepper, spices, and coffee, which last has already been planted at Korata; and even the coast, and hottest districts, might give crops of cotton of fine quality. Barley, wheat, peas, grain, beans, maize, Indian corn, millet, linseed, saffron, oats, and some kinds of grain unknown to us, are cultivated with little trouble; a small oblong potatoe, called "dennich," and the root of a very nourishing banana, the "ansett," form a great part of the food of some districts.

"In the present confusion and supineness not a fiftieth part of the surface is, I suppose, cultivated; while such is the bounty of Nature that Edjow, and other provinces, produce two crops per annum on the same ground.

"Fruit-trees, the plum, the orange, the lemon, and the peach, grow wild in the jungle; the vines are luxuriant, and

the quality of the wine excellent; numerous streams everywhere irrigate and adorn this agreeable land, whose rich meadows, lowing herds, sparkling waters, golden harvest, and shady trees, often present a scene of European beauty to the traveller.

"Gold and copper exist, and iron is found in great abundance; plains of sulphur and various salts, in the province now occupied by the Taltals, supply all Abyssinia with those commodities; and other wealth may lie hid in that volcanic tract. A search for coal would, elsewhere, be probably successful; but to describe the mineral and natural riches of this country should be the task of one better qualified for the investigation.

"It is a country that combines mineral resources, a delightful climate, and tropical luxuriance, with so much general salubrity, that no waste of European life need be apprehended from frequenting it.

"The temperature of the moderate elevations is very regular, in some places scarcely varying ten degrees throughout the year. Mineral and hot springs abound. All the colder provinces, particularly the Galla, are favourable to horse-breeding; sheep, goats, and cattle, thrive throughout the country; the mulberry has been grown; the potatoe, lately introduced, flourishes; the food is, in general, found too abundantly, as it is found almost without labour.

"But while nature has done so much, human energy, or skill, has done nothing. The utter want of roads and bridges —the stagnant, or lawless, nature of the social system—the obstinate attachment to ancient customs—the multitude of rulers, indifferent to everything but their personal enjoyment —the constant wars, and consequent insecurity of life and property—are fast ruining a country of whose beauty and fertility its inhabitants may, with some reason, boast.

"The divisions of language in Christian Abyssinia are two, Teegré and Amharic. The former, a slight corruption from the ancient Geez, itself derived from Hebrew and Arabic, and the latter, in my opinion, a distinct language, into which have crept many words from the former. The Amharic is now the written language of the country, the Geez character being used, with some additions. The Teegré dialect is spoken in the province of Teegré, bounded by the River Takazzee, flowing from the south-south-east to north-north-west, and with some variations all along the sea-coast from Massowah, inclusive, to the port of Aggeek—the Amharic, by the rest of Abyssinia, from the Takazzee to the Abäi: and also in the province of Shoa. In Teegré I include the tribe called Agow, that inhabit a district at the source of the Takazzee, anciently called the

Kingdom of Lasta, whose origin I cannot divine, and whose language is totally different; and in the Amhara, the Agows of Damot, whose language is half Galla.

"The manners of the Amhara are pleasing: their features are generally of the European or Asiatic, that is, Arab cast, and they are remarkably quick and intelligent. Their standard of morality is very low: sensual pleasures, as intoxication, are gratified without scruple and without shame: in general the interests or convenience of the moment are the only rule of conduct; want of tact and ill-temper the only crimes in the Amhara code. Two phrases in the Christian doctrine that suit his careless temper are much insisted on, 'that this world is fleeting and valueless,' and 'that the indulgence of the Creator is infinite,' the one to justify his insouciance, the other as removing all check to his follies and enjoyments. Crimes are seldom committed wantonly, but all considerations yield generally to those of interest, whether in prince or people. They have a great contempt for other nations, and scarcely know, or do not care, if any exist or not; the tribes on their borders they regard as created for the breathing fields of Abyssinian valour; hardly believing that the rain falls, or the sun shines, on other lands, they are persuaded that the world beyond the sea is a succession of barren deserts. The most common question to a European is whether corn grows in his country, and sometimes whether there are women; yet they are manly, generous, usually humane and indulgent, always polite, and seldom coarse. I attribute their faults to ignorance, their virtues to a kindly nature. Except tillage of the ground their pride renders them adverse to labour; but the women are exceedingly industrious.

"The people of Teegré are somewhat different in character; with more of the obstinacy of their Jewish blood they are ruder and vainer than the Amhara, noisy, talkative, and quarrelsome. Though nearer the sea, they are even more ignorant of other nations; they despise all the human race but themselves, and generally each man, all existing but himself. On the whole, I think them inferior to the Amhara, but they are more laborious, and more trustworthy individually, though politically treacherous.

"The Agows have a peculiar character as well as language; they are sterner, harsher, and more resolute than the other Abyssinians, and are proverbial for dissimulation and hardness of heart, as well as extreme selfishness. They permit no interference of the other races in their government or internal policy and laws. They all speak the Teegré and Amharic as well as their own language. They are always governed by a

chief of their own race, whose laws, though severe on themselves, are just, and even encouraging, towards strangers. They acknowledge, as feudal superior, the Ras of Begemder, since the fall of the Emperors of Gondar.

"The inhabitants of each province in Abyssinia have some peculiar traits; as Godjam and Kalagoozia are famous for union, Teegré Central for the contrary; some are warlike, some cowardly, some faithful, and some treacherous, and so on. In some respects they are a happy people. They possess in their own land all the necessaries and many of the luxuries of life in profusion; they have great freedom of speech and action, and are always gay, systematically, as by constitution. Their conversation, often sensible, is always witty. A practical philosophy leads them to prefer laughter to tears; the tragedy and comedy of life are received alike with indifference or a joke. Misfortunes and death are generally met with fortitude. It is hard to convince them that they will benefit either by our science or our wealth.

"The most curious point in their character is this, that no one is expected to feel ashamed of any crime or vice; and whereas in other countries men in committing serious crimes are morbidly excited, in Abyssinia they are perpetrated with indifference, and generally recounted, sometimes by the individual himself, certainly by others, with gaiety and laughter. In the same way, females are rarely gross or immodest outwardly, seeing that they need in no way be ashamed of the freest intercourse with the other sex. I have never yet been able to discover what an Abyssinian could be ashamed of, except a solecism in what he considers good manners, or the neglect of some superstitious form of social observance. They are peculiarly sensitive, however, to ridicule and abuse, whether true or untrue, and half the time of an Abyssinian master is passed in deciding disputes on such subjects. Some traits, though apparently of slight consequence, are often very irksome to a stranger; for instance, every man above the lowest rank has a door-keeper, whose duty it is to examine who should be admitted, and when. The insolence of this officer rises in proportion to the rank of his master. The primitive antechamber is a court in the open air, without seats, often muddy, always filthy; and as the porter will contrive to keep you waiting, even against his master's orders, this system is most disagreeable to an European. Further, you wait amongst a crowd, and it is pointed out to you that the brothers or sons of the King are there in the same position.

"Sometimes the order comes to clear the court, when sticks are used without distinction of persons. The chiefs affect a

trifling and childish manner, to the great annoyance of a white man, who has, perhaps, some important affairs to speak on, and who, from his more energetic feelings, thinks them of greater importance than they are. I will not dwell on these matters, but the difficulties they raise are not trifling, nor easy to vanquish.

"The Abyssinians are superstitious; they believe in the efficacy of amulets, of writings in jargon mixed with Scripture; in the charms of Mussulmans to control the hail and the rain; in spirits of the forest and the river; in omens, in fortune-tellers; and in devils that may be cast out by spells from their human victim, quoting the authority of the New Testament for their belief: to these they attribute epilepsy and other incurable diseases.

"One absurdity has, however, led to the death of many innocent individuals: all workers in iron, and some others, are supposed to convert themselves into hyænas, and to prey invisibly on their enemies, and many have been slaughtered in this belief. It is not worth while to enter upon a full account of this singular idea, which is universal and tenacious, and has its parallel in the 'loup-garou' of France, and the 'wehr-wolf' of Germany.

"Gambling appears to be unknown, but they are constantly betting, not, however, to gain money, as the judge of the forfeit receives it from the loser, the winner having thus punished his adversary. This is a fruitful source of revenue to the chiefs. In their houses they are dirty, and generally in their domestic habits, though cleanly in person when their means will permit.

"Save the door-keeping I have mentioned, much freedom exists in their society: in one room a beggar jostles a chief, and a dirty rag presses against the white turban of a priest; or a thief, perhaps in chains, is seated next to an honest man. Nay, the latter will make way for the former with much politeness if an older man than himself. So indulgent are they, that even a madman is never put under restraint and rarely excluded, though perhaps dangerous. Visiting is unceasing amongst the middle classes, and hospitality is offered with indiscriminate profusion according to the means of the proprietor.

"In Abyssinian society no repugnance is even shown to those afflicted with apparent and loathsome disease, and no man forfeits his position by any crime. Theft is in many provinces regarded as an honourable employment; highway robbery as quite excusable, even if accompanied by homicide; rape is venial; and adultery regards only the husband. This

has probably been the national character for many ages, and now that misrule and anarchy are superadded, the Abyssinians are unconsciously retrograding to a savage state, and losing all the advantages they may have acquired from the adoption of Christianity. Yet they still nourish the delusion that they are a nation, as when their kings marched armies into the Holy Land and governed Arabia, while their fleets traded to India, and their African dominions were bounded by the White Nile, the Red Sea, and the Indian Ocean.

"They have in general an aversion to change in their religious observances, laws, and customs: their ancient laws are, however, nearly forgotten, and their manners are changing yearly. This, which is characteristic of the race, is a great obstacle to improvement. Neither the idea of progress nor the word exists; for all absurdities and abuses, even for injustice, the reason 'it has always been so' is held sufficient even when the error is admitted. In consequence, as nothing can be stationary, their whole institutions are degenerating.

"They are very quick of apprehension and subtle of speech, and as from childhood they are accustomed to select phrases that may be agreeable to the person they are addressing or useful to themselves, are always specious and sometimes eloquent. It is very difficult for a stranger to arrive at the truth by questions.

"They are fond of litigation, and most of them skilled in the quibbles and proverbs that are essential to success in any dispute. It is the favourite sport of boys and children, and the smallest difference of opinion furnishes matter for a long and sometimes expensive lawsuit. The obstinacy in trifles is a mark perhaps of their Jewish blood. Notwithstanding the abundance of food in Abyssinia, nothing is more difficult or occupies more time than to provide for the daily wants of an establishment. A chief can obtain anything at once, and often without payment, where a stranger infinitely richer would, without his friendship and assistance, run the risk of starving. Nothing can be obtained by money except at a market, and often at a very great distance. Shops are unknown, and almost all trades must be practised in each household. Water must be carried for household purposes from a distant brook, corn must be converted into flour, cookery must be prepared, bread baked, and beer brewed, in every establishment according to its numbers, and to no office of domestic utility will a man put his hand for any amount of hire. On a journey where no markets can be found all necessaries must be carried at least to the next large town, involving a very inconvenient amount of baggage. The Abyssinians, indeed, demand hospi-

tality at each village, and take up their quarters without ceremony, often having to fight for the accommodation.

"The personal baggage of a merchant is equal in bulk to his goods. In more dangerous times, when baggage is a serious impediment, this billeting system becomes an imperative necessity for all travellers. On a campaign, the country people having fled from their homes on the approach of an army, money is entirely useless, and the King must either supply the stranger in his camp, which he cannot always do, or the latter has the alternatives of starvation and foraging. Grass is abundant in the country; but some local potentate or band of villagers must in general be propitiated before beasts are allowed to feed, and this cannot always be done by money; nor is the European character usually disposed to the other resource of flattery. An irritable man should not visit Abyssinia.

"The greater part of the time of all classes is occupied in eating and drinking. The instant any guest is received, no matter at what hour, he must be fed, and is not allowed to refuse; meat is always produced, or beer, for they love not dry talking, be it at daylight or at midnight. The profusion at their meals, and the large number of retainers and daily guests that are fed by men of rank and wealth, bear a resemblance to the customs of our Saxon ancestors. The parallel may perhaps hold good in other points. The gates are open in the evening to all who demand food and shelter in the name of friendship or religion; rich and poor are seated at one table; in the house of a great chief public singers chant the legends of their heroes, or receive guerdon for reciting impromptu stanzas in praise of their host and his guests; nor does the frequent intoxication weaken the likeness. Feasts are instituted a certain number of days after death, being a point of honour with the relatives of the deceased, and encouraged by the priests, who are guests by privilege, and who live principally by these general banquets. Numerous oxen are slaughtered, and for two or three days the streets reel with drunkenness, the white turbans of the pastors being conspicuous. The rejoicings at each wedding furnish equally good cheer; and as it is not difficult to obtain admission, these festivities are a great resource to the scribes and all the poorer classes. I believe the truth of the remark made to me by an Abyssinian who had visited Rome, 'that while the rich in Europe could live more luxuriously, there was no country like Abyssinia for the poor;' but he did not perceive that this arose from the scantiness of population, the richness of the soil, and the smallness of towns.

"From constant exercise, the Abyssinians have great powers of memory: though a written language exists, they seldom hold correspondence, and when a letter is written it is never signed, sealed, or dated; yet easy as a forgery would be, I have never heard of an instance. All affairs are conducted verbally; and at a distance by messengers. These messages are usually delivered with fidelity, and the character of the herald is considered sacred.

"In the relations of parent and child the Abyssinians are kind and indulgent. The children are obliged by law to share their means with their aged parents, and generally do so voluntarily. No distinction is made between legitimate and illegitimate children, and all share alike on the decease of their father. Marriage is a civil contract between the parties, dissolved at pleasure, and it is usual in old age only to take the sacrament together in the church, thereby pledging themselves to fidelity and monogamy. The people of Teegré are less lax than the Amharas, amongst whom women are regarded as toys, without the trouble of secluding them in a harem.

"Friendship is measured by gifts. Each chief begs from his compeer: nay, from his own dependant. Nothing will so much strike a stranger in Abyssinia as their custom of asking without reserve—without shame, for anything they may fancy. They are, however, ready to make compensation; they may be offended at a refusal of their request, but equally so, if the return be not accepted. They cannot imagine that this is not the custom all over the world. If an Abyssinian returns a gift and says, 'I require nothing but your friendship,' the phrase is studiously polite, and means your gift is not of sufficient value. They treat all strangers in the same way. The chiefs beg without ceremony, but in return bestow their friendship, which is necessary, and sometimes more than the value of the gift in their country produce. To specify the minutiæ of this custom, practised by high and low, rich and poor, would be fatiguing. An embassy to or from a foreign prince, is a mere calculation of value exchanged. The poor make presents to the rich and powerful, and receive ten times their cost in return, protesting, however, that nothing is further from their desire; nay, so organised is this custom, that if a person bestows a gift on one of equal rank, and does not receive an adequate compensation, he can bring an action against him as though for debt, and will receive damages by law. This is the favourite manner in which they attack the purse of an European, and is a pretty and ingenious way to avoid direct begging. An European envoy to this country must, in the present state of society, exchange presents with the great

chiefs, or be regarded as an object of charity, and it must be done with tact to avoid the imputation of timidity or folly.

"The ties of relationship are strong, from mutual interest, as a barrier to the exactions of rapacious governors and the violence of the soldiery. They count kin to the fiftieth cousinship, and a man with many relatives has much influence. The military governor is constantly changed, but such a man retains a kind of hereditary power. They do not carry their union to the point of sharing their purse: on the contrary, incessant lawsuits are carried on between the nearest relations for land and property; but in moments of danger they stand by each other like a Highland clan. They muster in thousands to bewail one to whom they refused a loaf while living, and they all unite to avenge his death by violence.

"They retain two institutions of Judaism, and cling to them with obstinacy. The Saturday in Godjam is held of equal sanctity with the Sunday, so that water cannot be drawn, nor wood hewn, from Friday evening to Monday morning. Moreover, many animals are considered unclean, as the hare, the goose, in some districts the wild boar, and some other animals. There are numberless saints' days in the year, on which no work is done; and in the towns they will not even suffer others to work, which is most irksome to the traveller.

"As a nation they have never had any element of progress within themselves, nor do they appear ever to have wished for it. Coinage, and architecture in solid masonry, have never been attempted, though the Ptolemies set them the example of both, as shown by the remains of Axum, and the gold and copper coins found in those ruins to this day. The Portuguese introduced the art of brick-burning, and built towers and bridges of excellent workmanship; no person in Abyssinia can now make mortar. No purely national antiquities of any kind exist. Their kings and their people two thousand years ago, must have passed their lives as now, seeking only for daily splendour or enjoyment and indifferent to the perpetuation of their memory by any monument.

"Though difficult to persuade, no people would be more docile under slight coercion. As soon as a chief of firmness governs in any district, quiet and order prevail to a surprising extent without any police. The word of the chief suffices to produce this tranquillity; but it cannot last long, as on his death or removal, the means of disorder are unfortunately in every hand. To a foreign conquest little resistance would be offered; they are too imaginative to dream of patriotism; yet had they any national spirit, the rugged nature of their mountain passes would offer many difficulties to an invading army.

This spirit, which is entirely wanting, was supplied in their contests with the Mahomedans by fanatical excitement, and in warring with neighbouring barbarians, by the hopes of plunder.

"Individually they are brave; but in masses, being without discipline, are hesitating, and little to be feared. Having no coinage of their own, the only money that passes current in Abyssinia is the German crown of Maria Theresa. This is changed, in Teegré, into pieces of cloth of various lengths, fabricated from cotton of the country or of India: and in the Amhara into blocks of salt, which vary in number at each market-place. This salt is cut in the plains of the Taltal, near the Red Sea, and transported far into the interior. It becomes very valuable in the Galla provinces, where eight small pieces are sometimes exchanged for a dollar, and a hundred will purchase a slave. Gold, which under their Emperors was used as a currency, by weight, and was abundant, according to tradition, has now almost disappeared. The Ruler of Shoa sent some pounds of fine gold to the Court of Gondar, moulded in the shape of a mule, in token of fealty. The custom was continued till the last forty years.

"The whole dress of the people is of white cotton cloths, spun and wove in the country, nor do they consider a foreigner as dressed at all unless he throws one of their white mantles over his own apparel. It illustrates curiously the character of this nation, so vain and stubborn in trifles, to see the servants of even a well-dressed European follow him almost with shame, and the rest of the populace regarding him with laughter or sneers, nor is this a small matter nor a trifling difficulty. The first impression does much, and ridicule is harder to vanquish than persecution. Socrates, in our modern attire, would scarcely be respected in Abyssinia.

"There are no castes in Abyssinia, but the people may be divided into four classes—military, sacerdotal, agricultural, and mercantile; the number that cannot be included in these is insignificant—a few workmen, as tanners, saddlers, and blacksmiths, disproportioned even to the wants of the community, and some idlers who live by the produce of their farms.

"The great chiefs have generally much dignity of manner, and some of them might be models of tact and polite suavity, particularly those who have any pride of ancestry; but engrossed with the sensual pleasures afforded by their wealth and power, and uncertain how long they may enjoy them, they never dream of improving the condition of their subjects, though often just and indulgent in their rule, as far as the paramount necessity of conciliating their armies will permit.

"The cultivators of the soil—the small farmers and peasantry

—though struggling with many difficulties, form a numerous class. In spite of bad government, military oppression, and the constant devastations of war, they bear directly or indirectly the whole burden of taxation and the large standing armies. Though seldom wealthy, they are rarely in distress, and appear attached to their way of life. Soldiery are constantly quartered on them, except in some districts that always turn out *en masse* to resist, and where the troops dare not venture.

"Villages may be seen everywhere in Abyssinia, perched on hills, hidden in most inconvenient hollows, and far from water. There are two good reasons for this: in the valleys the borders of the streams are infected with malaria; and on the plain, if they are too easy of access, they are nightly infested by crowds who demand or exact hospitality. On any frequented high road many a ruined hamlet may be seen, deserted by its inhabitants on this account.

"Though the feudal power of the military chiefs is so great, it may be doubted if the influence of the priesthood be not more important. That body holds in chains the mind of the people, moulds at will customs, morals, and all the social ties, which have consequently remained almost unchanged, amidst the change of dynasties, the ruinous shocks of international war, and the gradual crumbling away of a wide and Christian Empire.

"The spirit of Protestantism, or free inquiry, is not more welcome in Abyssinia than in other primitive churches; but from the less eager spirit of its people, it has not been found necessary to check it by any penalties. Going to the fountain-head they teach but one book to the children of the laity, 'The Psalms of David,' and, without forbidding other learning, discourage it, confining it as much as possible to the clergy and the scribes. Their great numbers, the almost superstitious reverence of the multitude, and the practice of confession and absolution, have enabled the priests to pursue this system with success. All the larger towns are entirely under their control, and being cities of refuge, sacred even from the Ras, are filled with dissolute and dangerous characters. This institution is probably a remnant of their Mosaic law, and gives them great power over the bodies, as the ceremony of confession, and the dreadful thunder of excommunication, do over the imagination, of an ignorant race.

"The Christianity professed and taught in Abyssinia is much materialised. The religion that is elsewhere the companion of progress, is here made the stumbling-block to improvement; stress, for the most part, being only laid on its

ceremonies, and many being added that in no way belong to it. Though they detest the Church of Rome, and indeed despise all save their own, quarrelling even with the Alexandrian from which they receive their Aboona, or high Priest, through their love of contradiction, they may be thought to have taken some good lessons from the former, on the means of retaining the population in blind submission.

"All church service is conducted in the Geez tongue, unknown save to the learned. The Psalms are also in that language, and the pupil, while encouraged to read them, is persuaded that he should not seek to understand them, but that he fulfils a high duty by gabbling over a number of them daily. No one save the priest himself is ever instructed in the Gospel in any tongue. Great adoration is paid to the Virgin Mary, and to numberless saints and angels. Their churches are filled with pictures, to which, when unveiled, the multitude bows with reverence. Fasting is rigidly insisted on, sometimes however compounded for by money. These fasts embrace nearly two-thirds of the year, and most of those who keep them are convinced that they will be weighed against their sins, though this doctrine is not officially taught. So much do they attach importance to this and other outward forms, that a man of 'Hamazayn' will slay his near relative, and return home calmly, but will be horror-stricken should his wife have ground flour on a saint's day, or prepared his meal before the hours of fasting have expired.

"The churches are very numerous, and each church is itself an object of devotion, as it is firmly believed that the saint whose name it bears, actually resides in its sanctuary. The stones are kissed with awe, and offerings are deposited, which the priest receives; vows are registered and prayers are made, with equal fervour to the Virgin, our Saviour, or some traditional martyr of the Abyssinian church, from which they expect immediate benefit in this world as well as salvation in the next. Miracles, I need scarcely say, are not unfrequent, and certain spots of peculiar sanctity perform them almost daily. Whenever offerings slacken, and the numbers that kneel at the shrine decrease, a picture rolls its eyes, a leper is cleansed, or the blind are restored to sight.

"Great respect is paid to all who wear the white turban, the mark of priesthood; they are always addressed as 'father,' and as superiors in the second person plural, even by chiefs of the highest rank. Any person dying without having chosen a father confessor, is denied Christian burial, and so jealous are the priests of this great means of power, that they extend the rule to strangers. The confessors of the great men are usually

indulgent, and they are permitted to compound for their frailties by the endowing of a new church, or handsome gifts to an old one. Nor are monasteries wanting to complete the resemblance to the Roman Catholic Church, and to the middle ages, where every immorality is practised; nor solitary hermits who dwell in gloomy forests, feeding on roots, and exposed to ferocious animals, and who are sometimes as sincere as they are useless. Nunneries alone are absent from the picture, though vows of celibacy are sometimes taken, if rarely kept, save at an advanced age.

"Christianity is reduced to the simple form of obedience to the priest. The Gospel is forbidden in our translations into the modern Amharic tongue, nor is there one man in ten thousand who knows the commonest precepts of his religion. If some few moral ideas are not denied, they are never inculcated or insisted on, and absolution can always be obtained for money. So blindly devoted is the Abyssinian laity to these astute fathers, that even the almost daily spectacle of their drunkenness, excesses, and immorality, nay, the knowledge that the confessional means 'seduction made easy,' excites no feeling of disgust and astonishment.

"Thus it is not wonderful, if lying, illegitimate sexual intercourse, intoxication, or manslaughter, are regarded as venial—things that might be considered curious as the daily occupation of professing Christians, were it not for the ignorance in which they are studiously retained under meshes too cunningly woven to be burst by any efforts of their own. Their present immorality does not argue a bad nature in the Abyssinian; on the contrary, I am astonished that good and moral men are still found: and it is certain that Christianity, even thus debased, has hitherto saved them from the wantonness of crime and excess of cruelty that stains the records of almost all African races, and of some in other quarters of the globe. It is necessary for the stranger in Abyssinia to propitiate the church, or at least to be very careful how he attacks it in his conversation. Should an outcry be raised on such points as his want of respect for the priests, his not fasting, his eating with Mahomedans, which is regarded with horror, or the like, he will find it difficult to resist the storm, though the Abyssinian persecutor is generally content with banishment. It was by these means that the English Protestant Mission was unceremoniously ejected, when it was found that it was introducing the New Testament to notice in the Amhara language, and announcing truths dangerous to priestcraft.

"One-third of the lands was originally set apart for the church, but this portion is now much reduced, though its

share is still large. The native head of the Abyssinian church is called the 'Tchegee,' and resides at Gondar, his house being a place of peculiar sanctity; but the bishop, called 'Aboona,' who receives a reverence almost amounting to worship, is always a Copt. He is sent by the Patriarch of Alexandria on consideration of some thousand dollars collected and forwarded by the Abyssinians for his journey. The present Aboona is said to be the one hundred and eighteenth, and is named Salama. His chief residence should also be at Gondar, but there have been fierce disputes in the Abyssinian Church, and the gifts of Sahela Selassie, of Shoa, prevailed on the Ras Ali to banish the Aboona, who has since been living near Adowah, where he has still large possessions. All churches must be consecrated, all priests and deacons ordained by him; crowds of pilgrims are always waiting in his courts, sometimes intermixed with men of rank, some to obtain a blessing or to be assoiled from deadly sin, a great number to be made deacons. Worn with a journey of perhaps months, priests are there in flaunting red garments, carrying a mysterious box, wherein is kept the 'Holy of Holies' of each church, like the ark of the covenant—waiting for the blessing of the Aboona, which is equivalent to the consecration of that church. His sentence of excommunication is much dreaded, and he has great influence in all the political or warlike movements in the country. His residence is an inviolable sanctuary.

"From time to time the Church of Rome has made great efforts to induce the Abyssinians to recognise the Pope of Rome as their spiritual head. The Jesuits at one time having nearly succeeded, and having lighted up the flames of civil war in the time of the Emperor Socinios, failed at last, and were massacred or banished. At this time the struggle is renewed by several missions under three bishops to gain a footing in this territory. The Aboona by interdict, and when that fails by inducing the chief to expel these intruders, carries on a war with them with various success; for, as to his prestige, they oppose money. These missions are under the protection of France.

"Even the Aboona, influencial as he is, finds it difficult to assert his authority over the banded priests when they differ on any doctrinal point; nor dares he announce a truth that may oppose any strong national prejudice. Should he say that a Christian is permitted to eat what he pleases, he would raise a storm from which his sacred character would scarcely protect him. Priests are permitted to marry one wife, but not a second time, except the Aboona and Tchegee, who should lead a life of rigid celibacy.

"The only interference of the chiefs in church government is

in the appointment of a civil officer in each town, who settles all disputes, orders church ceremonials, and receives large profits. He must have some learning, and is called "Alika".

"The priests have no pay, but the profits on the land attached to each church are divided in proportion to their several dignities. Then the father confessors extract what they can, according to the wealth of their patients; the pious bestow rich offerings for their spiritual welfare, and the laity are mulcted on the occasions of births, christenings, marriages, deaths, registers of sale and purchase, burials, and the like; so that besides their continual feasting at the public expense, they are usually well-stocked with money, and from their numbers have been compared by the Abyssinians to locusts.

"It is just, however, to say that they have preserved the Christian faith, impure indeed, but still alive, in the midst of foreign invasion, domestic degradation, and the extinction of Government, and that it is under their protection that agriculture flourishes and villages are built where deserts would else be seen. What learning exists has also been preserved by them from utter extinction. But as they become themselves daily more corrupt, society more disorganised, and the law more inefficient, church and people will be lost in utter barbarism, unless Providence have preserved those embers of civilisation to be cherished into life by some more generous and powerful nation.

"Their learning is limited almost to the books of the Old and New Testament, into which some are admitted that we consider apocryphal; besides these there are some monkish legends, a code of laws, and the chronicles of their kings, containing in a mass of rubbish a few sentences worthy of notice. All these books, written by monks with much labour, were formerly eagerly sought for, but are now neglected, almost forgotten. That art of painting is nearly lost; and ornamental missals may now be found very cheap, as there are scarcely any purchasers; the number of persons that can read and write is diminishing daily, and the code of laws is becoming a mystery to the most learned. There are about four hundred works in the country, of which eighty-one for the Bible.

"Numbers of Abyssinian priests and monks visit Jerusalem yearly, and it may be deemed singular that these, receiving much kindness at the hands of Europeans, do not awaken their countrymen to some knowledge of the world beyond, and some better feeling towards their fellow Christians than contempt or indifference.

"Scribes or 'deftaras' are often more learned than the prests, and equally take advantage of the general ignorance.

Their principal gain is by writing amulets, and charms against every disease, almost against death. It is believed that some of these men, by their spells, can invoke demons and spirits from the waters, they being careful to nourish the delusion by juggling exhibitions from time to time. They also profess medicine, and as they do not much analyse the effects of their drugs, many an unfortunate falls a victim to some poisonous plant administered as a love philtre. Most of them are hangers-on of the different churches; they are generally cunning, debauched, and mischief-makers.

"Jews are still found in some numbers, and though despised are not persecuted; this may be owing to their poverty. They know nothing of the Hebrew tongue; but some read the Mosaic books in the Geez, and are as scrupulous in their ceremonials as their brethren elsewhere. They are the best masons in the country. They have no peculiar physiognomy.

"The Koomants, found only in the neighbourhood of Gondar, are acknowledged by neither Christian, Mussulman, nor Jew, and have a bastard creed, a compound of all three. They are skilful carpenters, and supply all Gondar with wood. They are despised, but being very courageous, and having lately shown an inclining towards Christianity, it is not improbable that their distinctions will soon disappear, many even now have ceased a practice which was the chief separating cause. They hung heavy weights in the lobe of the ear of the girls, who were thereby excluded from any chance of marriage with Christians.

"The 'Wytos' are a small class, who live by hunting the hippopotamus; they eat the flesh, and sell the hide and teeth. They call themselves Mahomedans, but are not recognised by the other followers of that creed. They principally reside near the Lake Tānā, and are a very handsome race. They are regarded with as much aversion as the Jews. But all these classes are permitted the free exercise of their own religious faith.

"There are many Mahomedans in Abyssinia, and in all large towns they have a separate quarter, with mosques and public prayers. From the advantage that their commerce in slaves gives them over their Christian competitors, the Mussulman traders are the most wealthy, and are, therefore, generally appointed to the high post of Negadeh Ras, or collector of all customs, literally 'head of merchants.' To enforce their authority these keep large bodies of armed men, and confidently predict the final triumph of the faith of the Prophet in Abyssinia. The Abyssinian Mussulmans, as distinguished from the Galla, are all traders; they will not eat meat killed by Christians,

and are frequently their superiors in morality and intelligence. They live on terms of equality, good humour, and friendship with the Christians, openly defend their creed, and receive any proselyte that offers, and do not appear to think that the restrictions of the Koran respecting strong drinks apply to them at all. Mahomedans and Christians do not intermarry. One cannot but admire the toleration of this people, though it does not extend to other Christians; however, no one can be molested on account of his opinions, and a small concession will always mollify the church. There is no distinction in dress between those who profess different creeds, and are all subject to the same law.

"The Mahomedans, like the Christians, do not in general seclude their women; and the latter maintain in general the important privilege of displaying their charms. This formerly was done by females of all ranks and religions, but lately, to imitate the great chiefs, who secluded their wives, from jealousy, the custom of a harem is being gradually adopted in the towns and by the wealthy. I may add here that, in spite of the prevalence of Christiaaity, and the abundance of its professing teachers, Mussulmans are not alone in the doctrine of plurality, almost every man keeping as many handmaidens as his means will permit."

I proceed now to make such observations on the extracts from the Report of Mr. Plowden as they seem to me to suggest. The singular mountain region they refer to, although situated in tropical Africa, far more resembles in climate and productions a temperate European or Asiatic country, while the races that inhabit it bear a closer relation to Asiatics than to Africans. In mere physical geography, Abyssinia, with the neighbouring country of the Gallas, embracing the extensive territory which reaches from the 8° to the 16° of north latitude and extending from the shore of the Red Sea to the Blue Nile, bears a close resemblance to the plateaux and valleys of the Andes, in which sprang up the civilisation of Mexico and Peru, although of very inferior capacity to these for social progress.

The two most advanced nations inhabiting the plateaux now described are the Abyssinians and the Gallas, who seem to me to be of one cognate race, although speaking different languages. The fullest account of the personal appearance of the proper Abyssinians is given by Mr. Mansfield Parkyns, who travelled in their country as late as 1843. "The Abyssinians," says he, "are of middle stature, averaging, I should think, five feet seven inches, rather more than less. I have seldom seen natives above six feet, and only one or two who reached six

feet two inches. In colour, some of them are perfectly black, but the majority are brown, or a very light copper or nut colour. The variety of complexion observable in both sexes is, I should think, attributable to the mixture of races, of which the nation is composed. Although in some districts certain colours appear to predominate slightly over others, yet I have never seen any district, and seldom even any family, in which you could find uniformity of colour." . . . "Both men and women are remarkably well-formed, and in general handsome,—often strikingly so. In features and in form the young Abyssinian women are perhaps among the most beautiful of any on the earth." . . . "They have a face nearly European, with a colour, not often dark enough to be disagreeable, but sufficiently so to present too great a contrast with their large black eyes, a defect which I have often noticed in some Asiatics, and even in Southern Europeans."

The Abyssinians, then, are a black people of various shades of darkness. They have prominent features, and the flat nose, thick lips, and woolly hair of the African negro are all absent. In complexion, person, and features, they have been thought to resemble dark Arabs, but it appears to me that they are, although certainly a different race of man, more like to Hindoos. A little work on Abyssinia lately published at Paris by Mons. Lejean, late French Consul at Massowah, has as a frontispiece a photograph of King Theodore, which fairly represents the most usual type of a Hindoo, both as to colour and features.

The Gallas are, at present, much mixed with the Abyssinians within Abyssinia proper, and although differing from them in language and manners, they seem to me to be of the same race of man, just as Mexicans and Peruvians, however widely differing in other respects, are of the same Red race. Mr. Plowden's spirited account of the Gallas is as follows:—

"The Gallas are noble in appearance, more grave and thoughtful than the Abyssinian, eloquent, strong, and generally handsome; with the pride of a nation of warriors, but very courteous and amenable to reason. Their women are not concealed, and mix freely in society; they are often beautiful—almost always graceful; liberal of their smiles and favours to the brave, and scorning the coward. I have heard that those tribes to the southward are more chaste than these Republicans, but I much doubt if they anywhere attach a particular value to the exercise of that virtue. Each Galla takes as many wives as he can afford to keep. Their features when unmixed with other races, are European. They have no religion, but, without being conscious of it, retain some forms of Christianity, as fasting once in the year, observing the feast of the Cross

and other. They perform also some rude pagan rites, and have a superstitious veneration for certain large trees, to which they sacrifice animals. One word serves for God and sky; and while they believe that a Supreme Being created them and the world, and orders everything according to his will, they have not the least idea of the immortality of the soul, nor any credence of a future state. In the monarchial provinces the faith of Mahomed has made much progress, and the Roman Catholics are making a vigorous effort to plant the religion of Christ amongst those other Gallas who are on their road to Kaffa. As these races have, as yet, no priesthood to blind them, and no strong prejudices to render them deaf, the chances of success are considerable."

Besides the Abyssinians and Gallas, the elevated plateaux with the lowlands of the coast are inhabited by wild tribes differing both in language and manners both from Abyssinians and Gallas, and Mr. Plowden enumerates no fewer than ten. These are frequently nomadic, and consequently also predatory. Of their physical form nothing is said, but the probability is that it will be found on due inquiry to be the same as that of the Abyssinians and Gallas.

Who, then, are the Abyssinians, and the Gallas, and others, if these be of the same cognate race? I have myself no doubt that, when the indispensable inquiry is made, they will be found to be an indigenous race, as much aboriginal to the country as are Chinese to China, Hindus to Hindustan, or Australians to Australia. It would be strange, indeed, if nature which has distributed the races of man so generally over the earth, should have omitted to people a large portion of the eastern side of Africa gifted with a fertile soil and temperate climate. An opinion has, notwithstanding, prevailed that Abyssinia was without inhabitants until peopled by Arabs from the Asiatic coast of the Red Sea. This theory was started by a learned and laborious German scholar of the seventeenth century, who had not himself visited Abyssinia, but who had studied its languages with the help of a native Abyssinian.

Ludolf's hypothesis is founded on the belief, that the languages of Abyssinia are formed in the same manner as the Arabic, and that they contain many Arabic words, while the Abyssinians in person have much likeness to Arabians. The first alleged fact requires a more critical examination than a German scholar of the seventeenth century, without personal experience, could have given to it, and the last allegation is certainly of small value.

The name given to the country and the people by the Arabs has also been adduced in corroboration of the hypothesis of

an Arabian descent. Habsh is the name which the Arabs give to Ethiopia or Abyssinia and also to a native of the country, but they apply the same word indiscriminately to Abyssinian and Negro, and to any part of Southern Africa as well as to Abyssinia. The word Habashat, probably a derivative from it, they apply to Abyssinia, and also to a mixture of nations—indeed, to any promiscuous crowd, a designation which it is easy to believe the Arabs, themselves a single people of one language, would naturally apply to the manifold tribes and nations of the opposite side of the Red Sea, with their many tongues. I have no doubt, however, that the name Abyssinia, adopted by Europeans in modern times, is really nothing else than a corruption of the Arabic word Habsh; but it does not appear how it can support the hypothesis of an Arabian origin of the Abyssinians.

There is no doubt, however, but that the two chief spoken languages of the Abyssinians contain a considerable number of Arabic words much mutilated. In the vocabulary of Salt, which amounts to one hundred and eighty words, I find several,—in all perhaps not fewer than twenty. The examination ought to be of the Geez or dead language, from which the current tongues, the Amhara and Teegré, are said to be derived. I have not had, as yet, an opportunity of examining the dictionary and grammar of the Amhara, compiled by Ludolf; and of the Teegré, the Agow, the Galla ,and above all the dead Geez, nothing is known. Some admixture of Arabic words could hardly fail to have taken place, when we consider the narrowness of the sea that divides Arabia from Abyssinia, and the enterprising character of the Arabs of Yemen even under the name of Sabeans, and the religious conversions they have effected since the time of Mahomed, extending even to many of the Gallas, so much intermixed with the proper Abyssinians as conquerors. Even the Abyssinians, like other mountaineers, home-keeping and unenterprising, were once tempted to cross the Red Sea and effect conquests in Arabia. This took place in A.D. 522, near a century before the time of Mahomed, and they are said to have retained their conquests for three-score years.

The Abyssinians, notwithstanding their isolation and the singular physical geography of their country, have made a social progress which places them above all the Negro nations, and perhaps on a level with the third and fourth ranks of Asiatic civilisations. They have immemorially domesticated the dog, the hog, the goat, the sheep, the ox, while, if we are to judge by their names, they have received the horse, the ass, and the camel from Arabia. They understand the art of making iron malleable, and the use of bronze, gold, and silver. They fabricate tissues for clothing, and the material is cotton

which they grow themselves, but which most probably they received from the Hindus. Their agriculture is, on the whole, respectable, for they grow cereals, and the chief of these are wheat and barley, those of temperate regions, corresponding with the temperature of their elevated country. To a considerable extent, they understand the indispensable art of irrigation. The coffee plant is an indigenous product of Abyssinia; but in its culture the Abyssinians are far surpassed by the Arabs, of whose country it is an exotic. It does not, indeed, appear that the Abyssinians had cultivated the plant at all, or elicited its virtues, until taught by the Arabs.

In one important department of the arts, architecture, the Abyssinians are not above the level of the Negros. According to the statement of Mr. Plowden, and there is no reason to discredit it, the Abyssinians, down to the arrival among them of the Portuguese in the fifteenth century, were ignorant of the manufacture of bricks and of the art of making mortar, and the few permanent buildings which now exist were constructed by Portuguese architects, before the expulsion of the Jesuits. These fathers must have exercised even more than their wonted activity, for they arrived in the country only in 1625, and were expelled in 1634; so that their whole stay extended to no more than nine years.

The celebrated ruins of Axum, in the territory of Teegré, might be adduced as an objection to the sentence of rudeness pronounced against Abyssinian architecture; but Axum was unquestionably the work of foreign artists. The ruins consist of blocks of hewn stone and of prostrate obelisks. One obelisk, however, still stands, and consists of a single block of granite sixty-five feet high, and, according to Salt, equal in beauty and workmanship to any obelisk of Egypt, and of the same pattern as the similar monuments of that country, only wanting the hieroglyphics. One stone had a Greek inscription on one face and an Ethiopian, probably a translation of it, on another. The Greek inscription has been translated by Mr. Salt, an early and accomplished traveller of the first years of the present century. According to it, the party who commanded the inscription is named Aezanas, which may be pronounced an Ethiopian, since it is not a Greek, word, and he calls himself the "Son of the God, the invincible Mars," adding, "In grateful remembrance of him who begot me, the invincible Mars, I have dedicated to him a golden statue and one of silver and three of bronze." The stone containing the inscriptions most probably formed part of the temple which contained these statues, and descent from Mars simply signifies that the king or chieftain in question wished to be thought a warrior. This is at least more rea-

sonable than King Theodore's claim to be a lineal descendant of Solomon and David, which would make him a Jew, a race contemned in Abyssinia under the designation of Falachas.

The conclusion to be drawn from the evidence afforded by the monuments of Axum is obvious enough. The architects and head artificers must have been Egyptians when the Greeks ruled Egypt, and before the Egyptians had embraced Christianity. As this last event had not generally taken place until the close of the second century, it is certain that the monuments of Axum cannot be less than sixteen hundred years old, and may be by some centuries older.

But, it may be asked, how came Egyptian monuments under the Greek rule of Egypt to have been constructed in a country so rude, remote, and isolated as Ethiopia must, in my view, have always been? The explanation is, I think, not difficult, and in other parts of the world we have parallel cases in illustration. A native prince of Abyssinia, whose principality lay in the extensive and fertile plateaux of Axum, may by good fortune, and possibly by better administration than usual, have attained some power, wealth, and population, and travelling Greeks from Egypt would instruct him in the Egyptian manner of raising monuments to his fame. The liberality of such a prince would invite architects and masons from the neighbouring country of Egypt, and on the death of himself, or the fall of his dynasty, the monuments would be left to neglect and ruin, that is, in the condition they now are, and most likely have been for many ages.

Several countries of the East afford examples of such a procedure. The finest monuments of Ceylon were built, not by the slothful natives of the island, but by Hindus from the continent. It was the same with the ancient and best monuments of the country of the Burmese, which are all ancient, and in taste, execution, and material, greatly surpassing those constructed in modern times by native artists. It is the same with the remarkable and extensive remains which have been of late years discovered in the very forests of Cambodia, which the present inhabitants are totally incapable of making, and which, indeed, they consider to have been the work of supernatural beings, as, indeed, do the Abyssinians in regard to the monuments of Axum.

But the most remarkable illustration is afforded by the ancient temples of Java. That fertile and fine island had never existed as one sovereignty; but in several of its wide valleys, princes of considerable power had arisen, and under their auspices the Hindu religion had been introduced, and monuments to it had been erected equalling, if not surpassing,

those of Southern India in beauty, and often in extent. These consist chiefly of temples erected between the twelfth and fifteenth centuries, and were evidently built by Hindu artists, the natives of the country furnishing nothing but labour. As soon as the Hindus withdrew, the natives, as long as they continued in the religion of the Hindus, erected only grotesque and ugly imitations of Hindu architecture, and ever since they adopted the Mohamedan religion, they have erected no durable structure of masonry whatever; for a Javanese mosque, a rough wooden structure, is little better than an Abyssinian church, which is built of rough unhewn stone without mortar.

In one matter, at least, the Abyssinians give an evidence of civilisation which no Negro people has ever given. They are in possession of the art of writing; and to judge by the form of the letters and their sequence, its invention would appear to be their own. The alphabet consists of thirty-three consonants, and is, like other Oriental writing, syllabic, the vowels being represented by diacritic marks. If the Ethiopic was cotemporary with the Greek inscription on the stone at Axum already referred to, it would follow that the Abyssinians were in possession of the art of writing some sixteen centuries ago, and, therefore, long before Angles and Saxons were so. According to the authentic statement of Mr. Plowden, the Abyssinians make very little use of it, but such has, no doubt, been the case with all rude people. It seems to be for the most part in the hands of the priesthood, and to have enabled them to preserve an ancient language called the Geed, which to the Abyssinians is what Sanskrit is to the Hindus, Pali to the Buddhists, Send to the Gebres, and what Slavic once was to the Javanese. The only remarkable work in it is a translation of the Bible, which is to the Abyssinians what the Vedas are to the Hindus and the Zendavesta to the worshippers of fire, being, like these, withheld from the laity, with the exception of "the Psalms," and these only to be gabbled without being understood.

Christianity is asserted to have been introduced into Abyssinia A.D. 331, the first bishop being Frumentius, an Egyptian, ordained by no less a person than St. Athanasius, patriarch of Alexandria. The practice of appointing a Copt to the archbishopric of Abyssinia has ever since continued, and he is obtained by a requisition and a handsome *douceur*. This is the Aboona. Thus the first bishop of Abyssinia is nearly cotemporary with the first bishop of Rome avowed by the State. The manner of his appointment bears some resemblance to that of the chief of the Catholic Church, and also to that of the Delai Lama, or head of the Buddhist religion of Tibet.

The Abyssinians are Coptic Christians, and have been longer Christians than most of the nations of Europe; and whether their Christianity be right or wrong, they are content with it and intolerant of any other form, while they have a powerful priesthood deeply interested in its maintenance. The Jesuits of Portugal were, after conferring substantial benefits on the Abyssinians in the arts, expelled for attempting their conversion to Catholicism, and French, Catholic, English, and German missionaries, denouncing each others' doctrines, are now commanded to be silent on religious questions, and confine themselves to preaching morality. The Abyssinians, in fact, seem to be as impatient of foreign theological interference as Hindus, Mahomedans, Buddhists, and Japanese, and it will be time enough to imbue them with sounder Christian doctrines when by a higher social advancement they come to have the capacity to understand them. In the meantime they are bigoted and contented barbarians. There is practical sense in the words ascribed to King Theodore, "What I want are physicians, surgeons, engineers, and artizans, and not missionaries of religion." The Protestant missionaries have been prohibited from distributing the Scriptures in the vernacular languages, and in the way of conversion the utmost that has been conceded to them is to try their hand in the conversion of the obdurate Jews, known in Abyssinia under the name of Falachas, and to that of certain heathen Galla prisoners of war, *experimenta in corpore vili.*

A country so backward in civilisation, and consequently in skill and industry, as Abyssinia, while, at the same time, it yielded no peculiar products in demand by foreign nations, afforded no field for external commerce. Coffee, indeed, is the peculiar product of Abyssinia, but it was not the Abyssinians, but the Arabs of the opposite shore of the Red Sea, who elicited its virtues and first cultivated it. The ivory of slaughtered elephants, and the bodies of captured or kidnapped men, women, and children, seem always to have been the staple exports of Abyssinia. At present it is a land-locked country, blockaded to the east by Turkish territory, to the west by Egyptian, to the south by the hereditarily hostile Gallas, and to the north by the barbarous Shangalla Negros.

Even rivers, which in other parts of the world are main promoters of intercourse and civilisation, are, in Abyssinia, all turbulent unnavigable streams. The main ones all fall into the Blue Nile, called by the Abyssinians the Abaï, which is itself, as long as it is in Abyssinian territory, turbulent and inaccessible to navigation. Yet this is the stream, worthless to Abyssinia, which, by carrying the rich drainage of their

country to distant Egypt, is the true cause of the fertility of the latter country, and in so far as this fertility is concerned, it is, in fact, the true Nile. Johnson, in his *Rasselas,* fancying it the only tributary of the Nile, and in language too metaphorical for accuracy, while he ascribes its source to Abyssinia, calls it "the father of waters, whose bounty pours down the streams of plenty and scatters the harvests of Egypt over half the world."

There is a tradition, and perhaps it is little better, that Ethiopia or Abyssinia once existed as a great and powerful empire. It is difficult to believe that so extensive a region, by its very physical aspect unfavourable to union,—which does not contain a single relic of ancient native art, and the inhabitants of which are now, and always must have been, greatly divided by lingual, tribal, and social differences, could ever have been united under a single administration of any durability.

When the Portuguese were in the country in the first quarter of the seventeenth century, there existed a chief of considerable power, their celebrated and almost fabulous Prester John; and there reigned at the same time four kings, nearly independent of him, and his own power was subverted even while the Portuguese were in Abyssinia. When Bruce visited Abyssinia almost one hundred years ago, the country was in anarchy and civil war, and it is so at the present day. During his two years residence, the most important prince was the party called by Europeans an Emperor, but known to Abyssinians as the Athie or Negus, whose capital was Gondor, in Amaraha, or the south-western division of the kingdom. Soon after the traveller's departure, the so-called Emperor was superseded by a chief of Teegré, on the north-eastern division of the kingdom, who became a kind of Mayor of the palace, or Mahratta Peshwa, and ever since, the Emperor has been a phantom, the country having been ruled with none less extent of authority by a succession of chieftains superseding one another. These are the parties known in accounts of Abyssinia under the name of Ras, which, in the languages of the country, literally signifies "the head," and metaphorically head-man or chieftain.

King Theodore is one of these adventurers, and the story of his career is a good example of the normal state of government in Abyssinia. His friend and favourite, Mr. Plowden, gives the following, and I have no doubt, authentic account of it:—

"A chief named Kasai, having great family influence in the provinces bordering on Sennaar, forced his way by the sword into some notoriety, and married the daughter of the Ras Ali (the 'Mayor of the Palace at Gondor'). Of a proud and im-

patient spirit, after alternate rebellion and submission, and having defeated in numerous battles all the troops that were sent against him, he at last threw off all mask, and openly defied the Ras Ali and his adherents. Having in some measure disciplined his troops, for the first time in this country, by the assistance of a few Turkish soldiers, he suddenly appeared, after extraordinary forced marches, in the neighbourhood of the Ras's blockading camp, and fairly challenged him to the combat on the plains of Godjam, favourable as they are for cavalry, the Ras's pride. A pitched battle took place, in which the Ras was completely defeated, and barely escaped, hotly pursued by his adversary. In a second battle he was entirely driven from the territories conquered by Gooksa (a former 'Mayor of the Palace'), and forced to take refuge in his natal province of Edjo. Dejaj Oobeay (Dejaj is a title equivalent to governor) in the north, had not even gained time to collect his troops when Kasai threatened him with his whole force, and obliged him to fly to his hill-fort in great fear. The victory, however, obtained by Kasai over the Ras had set free the daring chieftain Birro, son of Gosho, from his mountain; and the latter, to add to the complication, enemy as he was of the Ras, had a still more deadly feud with Kasai, on account of his father's death, slain in battle by the latter. Kasai, therefore, patched up a temporary peace with Oobeay, and hurried to meet this formidable rival; since when all parties have feared to enter into decisive conflict. A chief of the Teegray dynasty, Balgud Areya, had taken advantage of the confusion to raise the standard of revolt against Oobeay, but the return of this latter has, for the present, repressed any serious disturbances. Affairs now stand in a singular position: the Ras Ali has returned to Devra Tabor, but without any power beyond the range of his foragers. Dejaj Kasai and Dejaj Birro threaten each other in Godjam, with large armies, not having yet dared the encounter; and Dejaj Oobeay has reoccupied Teegray, after having seen by how feeble a grasp he holds his power. Numerous other chiefs have all their faculties on the alert to seize any chance that may offer; and it is difficult to say in whose hands the reins of power may finally remain. In the meantime it is certain that the roads are unsafe, commerce checked, justice paralysed, and diplomatic relations impossible; and it would be idle to hope that the anarchy consequent on these events will soon cease."

It appears that Kasai, or, to give his name in full, Kasai Karanya, was born in 1818, and that he commenced his career in 1848, when he was, consequently, thirty years of age. Down to 1854, the date of Mr. Plowden's report, he

seems not to have taken the higher title of Ras, but contented himself with that of Dejaj, or governor. It is since the death of his guide, Mr. Plowden, that he has taken the title of Athie, or emperor. In his letter to Her Majesty, his claims to the empire of Ethiopia as the lineal descendant of Solomon and the Queen of Sheba are insisted on, for it thus begins, "My fathers the Emperors having forgotten the Creator, he handed over their kingdom to the Gallas and the Turks, but God created me—lifted me out of the dust, and restored the Empire to my rule. He endowed me with power, and enabled me to stand in the place of my fathers. By his power I drove away the Gallas. But for the Turks, I have told them to leave the land of my ancestors. They refuse."

The character of Theodore seems to have been well drawn by Mr. Plowden, for this is the account of him:—

"Dejaj Kasai is vigorous and subtle, daring to a fault, and, perhaps, more disposed to innovation than any. He has abolished in his army the practice of mutilating dead bodies; taught his soldiers some discipline, makes war without baggage or camp-followers, and encourages foreigners. Though proud, his manner is all humility; he is severe, liberal, and usually just, but breaks out now and then into unaccountable acts of violence, which indicate a somewhat unsettled temperament; he commences enterprises with more vigour than he pursues them, and is much under the influence of prophets and fortune-tellers."

Upon the whole, then, I think we must come to the conclusion that, although the Abyssinians are very old Christians, they are but very indifferent ones, and that in civilisation and morals they rank below most of the nations professing Mahomedanism, Hinduism, and Buddhism.

XXVI.—*The Vlakhs of Mount Pindus.* By Major ROBERT STUART, C.B., Her Majesty's Consul in Albania.

[*Read Nov. 26th*, 1867.]

ALTHOUGH no written records exist of the origin and early history of the Pindic Vlakhs, there are fair grounds for believing that they are descendants of one or more of those tribes which, in the fifth and several succeeding centuries, were driven from their homes on the Lower Danube by the incursion of overpowering hordes from the north and east. Of their progress westward but little is known, or of the direction they took. But Chalcondylas observes that in his time they were established in all the countries lying between Dacia and Mount Pindus. The time of their arrival in Thessaly is lost in the obscurity of the middle ages: history, however, records that, as early as the tenth century, Greece (including Thessaly) was thickly colonised with mingled tribes of Sclavonic and other descent,—which tribes, it may be inferred, were subsequently fused into one people, which, either from identity of pursuits, or from the preponderating admixture of the Dacian element, gradually acquired the common name of Vlakhs. If we listen to their boasted legends of Roman descent, their cradle is to be sought, not in Dacia Proper, but in Dacia Aureliana, the name given to the new province in Mœsia, created in the year 270 of the Christian era, when Aurelian, pressed by the Goths and Vandals, withdrew the Roman colonies, planted by Trajan, to the south of the Danube, and made that river the north-east boundary of his empire.

Anna Comnena, writing in the eleventh century, makes mention of Vlakhic villages in Thessaly; and Benjamin of Tudela, describing his progress through Greece, states that, at Lamia, Vlachia begins, a country inhabited by Vlakhs. But whence this name of "Vlakh?" Anna Comnena says, "*καὶ ὁπόσοι τοι νόμαδα βίον ἕιλοντο βλάχους τούτους ἡ κοινὴ καλεῖν οἶδε διάλεκτος.*" We learn from this only to whom the name was applied, viz., to those who had chosen the nomade life. But in the present instance it more especially refers to the Danubian tribes which were at different periods ejected from their territories, and which flowed in successive waves through the Byzantine dominions in search of settlements. The application of the term, though serving to denote, does not explain its meaning; and one is not to look for aid to the Byzantines in etymological difficulties. In Sclavic, *Vlah* means *pastor;* in Magyar, *Vloh.* A close phonetic resemblance would suggest the identity of *Vlakh* with these

kindred words; which identity is rendered still more probable by reference to the pastoral life of the early Vlakhs, and to their long intercourse with both Sclaves and Magyars. But, on the other hand, the Vlakhs appeal to their name as a proof of their Roman, or at least their Italian, descent; for, in Polish, the Italians are called *Wloch*, the Vlakhs, *Woloch*. In Hungarian, the respective names are, *Olach* and *Oulach*; and *Wlaschazeme* and *Wolaschazeme* severally express Italy and Vlachia. The designation of shepherd or pastor may have specially been given to the descendants of Trajan's colonies, and subsequently, by a natural extension of time, to their kindred stock, the Italians. In this way the Vlakh pedigree is in no wise impeached by tracing their name to the same root as pastor. Leaving the solution of this question to the learned in Sclavic dialects, I proceed to observe that the Vlakh colonies established in Greece were of sufficient weight to give their names to their adopted countries. The classic name of Thessaly was for ages supplanted by that of Μεγάλη Βλαχία, *Megale Blachia*, or Great Blachia; while Μικρὰ Βλαχία, *Mikra Blachia*, or Little Blachia, designated an extensive district comprising Acarnania and Ætolia. Is it precisely known, I would ask, at what time the name of Vallachia was given to the southern part of ancient Dacia? We now hear no longer of Μικρὰ Βλαχία; Thessaly has resumed her ancient title; and the name Ἄνω Βλαχία, *Ano Blachia*, or Upper Blachia, which, sixty years ago, indicated the northern part of Pindus, has dropped into oblivion.

From the earliest notices of the Vlakhs it would appear that, in the course of their migrations, they always established their settlements in rugged mountain regions, difficult of access and easy of defence. Pachymera writes, "το Βλαχικὸν ἔθνος δυσχωρίαις χαῖρον," and Benjamin of Tudela (Latin translation) "Hæc est Vlachiæ initium, cujus incolæ montes incolunt." There are sufficient indications, historic or incidental, by which they may be traced in a circle round the great basin of Thessaly, skirting or cresting the ring of mountains which gird that fertile country. The Cambunian heights, and their counterparts south to the Peneus, were occupied by them. They were numerous in Dolopia and Phthiotis. I cannot discover any traces of them on Mount Pelion; but there is presumptive evidence that they occupied the fine lands at the northern base of Mount Ossa, where the plain of Larissa contracts into the vale of Tempe. They were established on the heights that overlook the Sperchius and the Cephisus, and thence they penetrated through the mountains westward as far as the Lower Achelous. In North Thessaly their chief

towns were Larissa and Tricala; in Dolopia, Kastania, and in Phthiotis, Armyro on the gulf of Volo.

Between Larissa and the vale of Tempè the distance is spaced at irregular distances by tumuli, of which the present inhabitants can give no account. There are several also near Velestino, the ancient Pheræ; and one, called by the Turks Pilaf Teppè, commands the pass which leads through the mountains, from the plain of Larissa to the low lands round the gulf of Volo. One or two similar mounds are to be seen between Salonica and the Vardar; and there are numbers of them, I have been assured, in Thrace. Those in Thessaly are of a regular, conical shape, about thirty feet in height, and very uniform in size and appearance. They follow a given line, and at distances so judged that they should command a sight one of the other. Riding one day in Thessaly with a Polish gentleman of great information and research, we happened to pass one of these mounds, and on calling his attention to it, he remarked that it was the same sort of mound that in the Scythian migrations the leading division used to throw up to indicate the line of march to the following divisions. According to this explanation one may conclude that the Thessalian mounds were erected by the Vlakhs on their first passage through the country, in conformity with a custom they had learned from the Scythians in Dacia.

From all the above mentioned places the Vlakhs have long since wholly or in part disappeared. Their head quarters are now on the heights of Mount Pindus, between Jumerka and the Haliacmon. Their out-stations dot the northern prolongation of the mountain as far as Lake Ochrida, and extend eastward at long intervals along the Cambunian range as far as the roots of Mount Olympus.

This collapse of a flourishing people resulted from the location of Turkish colonies in Thessaly and Greece, which, following De Hammer (lib. vi, 109), took place in 1397 by order of the Sultan Bajesid. These colonies were gathered from the western parts of Asia Minor, and the name *Koniarides*, which is still applied, though in contempt, to the Turks of Thessaly, indicates Iconium as the place from whence they originally came.*

Although these Turks have long been known as a quiet, inoffensive people, it may well be believed that on their first arrival as Timariotes, they were of a different character: at all

* The name, no doubt, ethnically means natives of Iconium, but to the Greek who uses it it serves to embody a notion of dislike and contempt which may be paralleled in English, supposing we had a secular aversion to the Portuguese, by such a term as *Lous*itanian for Lusitanian; from κόνις, κόνιδος, a louse, *nit* (A. S. *hnitu*). [S.]

events the Vlakhs retired before them, and in the silence of history on the subject, and the dimness of tradition, the obvious inference is that, pressed by superior numbers, and reduced perhaps to the condition of Helots, they gradually withdrew from or deserted their settlements, and eventually took refuge in their present rugged fastnesses, their farther retreat being stopped by the fear of conflict with the powerful tribes of Albania. Thus, guided by their mountain instincts, they were enabled to find a home and safety in regions where other people would have perished.

This movement most likely extended over a series of generations, for Leake, *Travels in Northern Greece*, i, 274, writing in 1805, inclined to the tradition that the Vlakhs had not then been settled more than two hundred and fifty years in Pindus, which would agree very well with the inferences deduced from other known probabilities concerning this people.

Having thus hastily traced the course of the Vlakhs to their present retreats, I now proceed to notice briefly some of their distinguishing habits, their subdivisions, and their general condition and character.

Although it is presumable that they are all descended from the same or nearly the same origin, they were so dispersed in their first wanderings over Pindus in search of homes, and have since been kept so much apart by the natural obstacles to communication, that they have drawn off into separate clans, severally distinguished by name, pursuits, and even by pretended traditions. With the mass of the Vlakhs tradition is singularly blank: they sing no songs or tell no stories of their forefathers' deeds, and they seem to be ignorant and careless of their origin. But, with an excusable vanity, some of their bookmen have endeavoured to fill the void in their history, and not content with a Romano-Dacian origin, they claim a direct descent from the Romans themselves. But these bookmen differ among themselves, and depart, all of them, from historic probability, in tracing the line of descent. For instance, the Vlakhs of the Aspropotamus, it is pretended, are descendants from the wreck of Pompey's army defeated at Pharsalia. For the Malacassites, it is said that their forefathers came direct from Italy, whence they were banished for having taken part with the murderers of Pertinax in A.D. 193; and the Dassaret Vlakhs, who dwell to the south of Lake Ochrida, are, according to the same authority, descended from an Italian or Roman colony planted by an emperor named Maximus in Taulantia (now Musachia), whence they were subsequently driven to the mountains by invading hordes from the north.

I notice these legends merely to dismiss them. At the same time I cannot explain why the Malacassian Vlakhs are

called Bruzzi, or why two of their chief towns should bear the names of Calabrites and Syraku.* The resemblance of these names to Brutii, Calabria, and Syracuse cannot be denied. But in the absence of all historic light on the subject, any attempt at elucidation would only end in increased obscurity.

Discarding then the fabulous, and all that may be treated as recent invention, one is bound at the same time to admit that the claims of the Pindic Vlakhs to Roman origin are not merely imaginary. Linguistic affinity furnishes some of the most unerring clues in ethnological researches; and the language of these Vlakhs, corrupt though it is, and debased with alloys of Sclavic, Greek, and Turkish, still retains the essential characteristics of a Latin dialect. The Latin words are less numerous than in some of the more finished languages elaborated from the same stock—in part, perhaps, because the ideas to express are less numerous—but the syntax and inflexions of the verbs still conform in a remarkable degree to the ancient model.

Form of head and cast of features are further helps in tracing family identity. I have often been struck with Vlakh heads and faces of unquestionably Roman type and mould. But this resemblance does not perhaps argue much, as it may be looked for in every country which was subjugated or colonised by the Romans.

Pouqueville, who studied the statistics and distribution of the Vlakhs with more attention than any other modern traveller, classed them as follows in 1815 :—

	Families.	
AUOVLACHIA :—		
Malacassites	2,465	
Aspropotamites	2,230	
Metzovites	1,870	
Zagorites	1,130	
Nomades	1,200	
		8,895
BOMEI OR BOVIENS :—		
Nea Patra	378	
Carpenisi	981	
Zeïtoun	600	
Nomades	240	
		2,199
DASSARETS :—		
Sedentary	2,900	
Nomades	800	
		3,700
Families		14,794
		5
Souls		73,970

* All accident. *Seráku* means *poor* in Danubian-Wallachian. Kala-

I have transcribed the above classification, although it is no longer applicable to the Pindic Vlakhs; but it serves to show their numbers and distribution at a time when their fortunes and condition were still at their zenith. The name Ἄνω Βλαχία, *Ano Blachia*, as has already been noticed, has long since fallen into disuse; and the Bomœi or Bovians, whose settlements in Ætolia and Acarnania, went by the name of Μικρὰ Βλαχία, *Mikra Blachia*, have passed from Grecian into Turkish territory, and under the name of Sarakatsani* have established themselves in Agrafa, where Pindus and Othrys unite to form a barrier between the inhospitable regions of Ætolia and the sea-like plains of Thessaly.

The Albanito-Vlachi must not be forgotten in the enumeration of the Vlakhs. As their name denotes they are of mingled blood, and, constituting a distinct clan of some two thousand families, they live in tents and pasture their flocks on the mountains and valley plains of Kolonia, about the sources of the Apsus river.

Sixty years ago (Leake i, 274) there were about five hundred Vlakhiote villages, none very small, dispersed throughout the mountains of Epirus, Thessaly, and Macedonia. With the utmost diligence, I believe, it would now be difficult to reckon up half that number; and Pouqueville's 74,000 Vlakhs have dwindled in the present day to 45,000 at the outside.

The transition from the pastoral to the agricultural life is slow and against the grain;—to the mercantile, on the contrary, easy, and, I may say, of natural sequence. Once a nomade people settles down, the possession of flocks is, of itself, suggestive of industry and manufactures, without which, milk, wool, hair, and skins would either be perishable or be limited in value to the price of the raw article. To the Vlakhs industry and trade were rendered all the more necessary, because in their mountain retreats there was not pasture sufficient for their flocks, nor cultivable land sufficient to supply them with bread. Moreover, in the long imprisonment of winter, when for months the deep-lying snow cut off all communication with the outer world, the Vlakh, accustomed to movement and activity, must needs find employment—a state of utter idleness would have been intolerable to him—and employment, to be attractive, must be useful or profitable. Accordingly we find that in the beginning of the present century, most of the chief

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brites should be *kalarites*—καλαρρύταις. Bruzzi is unknown to me. It would be the regular Wallachian plural of *brutu*, if that word exist in the language.

* From Saraketsi, one of their former villages in Acarnania.

towns of the Vlakhs were flourishing centres of commerce and industry in their several cantons. Those chief towns were then, as well as now—Vlakho-Livadhi, near Mount Olympus; Voskopolis of the Dessarets; Metzovo and the twin *bourgades*, Syraku and Calabrites; all these places merit separate notice, and inverting their order I begin with the last.

Pouqueville had no historic authority for stating that Calabrites dates from the beginning of the thirteenth century. All that is known of its commencement is from tradition; and tradition, which always plays loosely with dates, is in this case peculiarly liable to suspicion, from the well known vanity of the educated Vlakhs, who would certainly strive to add local antiquity to their other claims to admiration. These same gentlemen pretend that the name *Calabrites* derives from *Calabria*, and not from Καλήϑρύσις, *Calebrysis* (good fountain). The abundance of delicious water with which the place is supplied would certainly suggest and justify the latter derivation. But whatever may be the etymology of the name, Calabrites is situated on the southern slope of Mount Polyanos, at the foot of a bare treeless declivity called *padourè marè* in Vlakh, "the great forest;" whence it would appear that this declivity was originally thickly wooded, like other parts of the mountain, but in course of time was stripped of its clothing by the ruinous process of burning and felling timber which is still in unchecked operation throughout the Ottoman dominions. In the beginning of the present century Calabrites counted nearly six hundred families, and presented an aspect of prosperity, order, and progress, that contrasted strongly with its desolate situation. This state of things was the result of a long course of industry and enterprise, to which the inhabitants had early devoted themselves, partly led by their own innate energy, partly constrained by the necessities of the place. Their industrious habits brought them into intercourse with their neighbours, amongst whom they sought purchasers for their wares and produce. By degrees they opened a trade with Arta and other towns, their woollen manufactures and fabrics in goat skins got into demand, and they acquired a name for the φλόκατα, *phlocata*, still in general wear in these parts, and for the rough *cappa*,* which is in demand, not only throughout Albania, but with the mariners of the Adriatic and as far as Italy and Spain. Gradually extending their relations, towards the middle of last century the Pindic Vlakhs had won for themselves a place amongst the foremost merchants of the Levant; they had counting-houses at all the chief ports of

* More commonly known in English as a *grego*.

Italy, and as far as Cadiz, Vienna, Constantinople, and Moskow. Their foreign trade was carried on under the French flag in Greek vessels; and the shippers of Galaxidhi were their chief carriers. At this time they had acquired considerable skill as gold, silver, and copper-smiths. The Albanians resorted to them for their highly wrought gun and pistol stocks, for sword handles, yataghan sheaths, cartouch boxes, and for the large clasps and other ornaments worn by their women. The manufacture of these articles is still a speciality of the Vlakhs in Epirus, and their skill as silversmiths has lately been stimulated by the large and increasing demand for the beautiful ornament known as "the Janina clasp" in the fashionable circles of England, France, and Italy.

But the Vlakhs were at this time something more than mere artizans, mechanics, and traders. A taste for letters had grown up amongst them; choice collections of books were to be found in their houses; intercourse with strangers had rendered many of them good linguists;* and as their commercial interests obliged them to study foreign movements with reference to the course of trade, they were consequently well versed in European politics, and could calculate the chances of exchange, and the rise and fall of the funds in the various markets of Europe. The rule of their domestic life was order, cleanliness, and decency; their houses were commodious and were strongly built, to resist the elemental strife of their wintry regions; the community was administered by a municipal council, which framed regulations and assessed taxes independently of all government interference. This privilege of self-government had been secured at an early date by the foresight of the Vlakhs of Aspropotamus and Malacass, who, dreading Turkish law and the arbitrary rule of an irresponsible provincial governor, succeeded in placing themselves under the immediate protection of the Validè-Sultan, into whose private chest they annually paid the sum of 2,000 piastres† in quit of all government imposts.

Under this system of self-government, the Calabritiotes arrived at the state of progress and prosperity in which we find them in the early part of the current century. It was then that their fortunes began to wane; an evil eye had long been fastened on them; their wealth and independence had provoked the cupidity and the enmity of Ali Pasha Tepeleni. By combined action the Pindic Vlakhs might have resisted that op-

* It should be mentioned that their literary language and culture were Greek, their own language remaining merely oral and uncultivated.

† £168. The piastre was at that time worth about 1*s.* 8*d.*

pressor's power, but the pursuits of peaceful commerce had softened their character. They no longer possessed the martial spirit of their nomade fathers; for notwithstanding the strength of their mountain positions, they made no resistance to the spoiler, but meekly resigned their privileges into his hands, and submitted to the exactions he imposed on them. Appeals to their protectress were in vain; indeed, the Pasha contrived to keep her majesty in good humour by carefully respecting her rights, and her annuity was regularly remitted until the standard of revolt was raised in Epirus, and all imperial rights in the province were for a time confiscated.

In 1806 the Calabritiotes were assessed at 45,000 piastres* a-year, and their debt had grown to 150,000 piastres,† for which they were paying 15 per cent. interest. Against these formidable difficulties they patiently struggled until 1815, when a commercial crisis supervening, their embarrassments reached the culminating point, and they succumbed beneath them. It would appear that, tempted by the opportunities arising out of the continental war, they had engaged in speculations to the utmost tension of their capital and credit. These speculations presupposed a longer continuance of the war, and consequently failed on the return of peace.

From that time the Calabritiotes have withdrawn from the wider fields of commerce, and contracting their operations to their available means, they have dwindled down to manufacturers of coarse cloth, to small retailers, and humble tradesmen. Their flocks are tended by paid shepherds chosen from the poor of their own community, and their wives and daughters cultivate their scanty lands. Their municipal debt is still owing, and will never be paid; for, after the crash of 1815,‡ all those who possessed anything fled the country never to return, and but little was to be got from the paupers who remained. Calabrites obligations became therefore waste paper, and many of them are still to be found in Janina, preserved by the descendants of the original holders.

But Calabrites had not yet drained the cup of misfortune. In 1821, when Janina was besieged by the imperial forces, many of the wealthier inhabitants escaped with their money and valuables to Calabrites and Syraku, where they hoped to find shelter until the storm was over. The besiegers were furious on hearing of the removal of so much of their expected booty; a charge of treasonable conspiracy was trumped up against the fugitives and their protectors; a force was detached

* £3,000. † £10,000. At this date the piastre was worth 1*s.* 4*d.*
‡ Between forty and fifty families went at this time and settled in Zante.

against them, and Calabrites and Syraku were plundered, sacked, and burnt. All the vestiges of former prosperity were destroyed; the archives and collections of books were tossed into the flames, and nothing was left but piles of ruins to mark the sites of these once flourishing towns. Their names, however, are not lost. The inhabitants who fled on the approach of the enemy, returned on his departure; they must needs provide themselves with houses; their local attachments were strong; the materials were *in situ;* and on the ruins of their former homes they built as many *καλύβαι, calybæ,* as they needed, and to the aggregates fondly gave the old names.

In 1820 Calabrites numbered five hundred and thirty houses and Syraku five hundred; the latest census gives to the former one hundred and twenty-eight,* to the latter one hundred and forty-eight.* But the first was sparkling, bright, and gay, grouped into fairy cities that startled the traveller in those mountain solitudes. The present villages are modest enough, and yet one does not come upon them without surprise, so dreary and inhospitable is the surrounding scenery.

Below Calabrites, on the banks of the river that rushes by the foot of the slope, are the scattered remains of an ancient Hellenic town. Some years ago a tomb was discovered among the ruins, and was opened by the villagers, who found in it some silver coins and a short sword blade. The coins were sold to a Vlakh silversmith, who melted them down; and the sword blade to a gipsy blacksmith, who turned it into horseshoe nails. There is reason to believe that ancient coins used to be found in considerable quantities in this country, but they were all, or most of them, at once consigned to the crucible, and other antiquities were valued and treated merely as old material.

The story of Calabrites is, with slight variation, the story of all or most of the chief towns of the Western Vlakhs. Voskopolis of the Dessarets was founded some time in the latter part of the fifteenth century, and at the beginning of the eighteenth was a flourishing city, with its printing-press, manufactures, foreign trade, and, according to some accounts, from eight to ten thousand houses. Nothing remains of it now but a couple of hundred poor houses inhabited by small retailers, and resorted to chiefly by shepherds. Mussulman envy could not tolerate its prosperity, and Mussulman violence accomplished its ruin. From a flourishing emporium at the beginning of the eighteenth century, it was at the beginning of the nineteenth what it still is, a poor hamlet in the midst of the wreck and ruins of its former prosperity.

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* Somewhat increased since.

Vlakholivadho, the chief town of the Cambunian Vlakhs, seems to have escaped the spoiler's hand. It is still a thriving village of some nine hundred houses, and is known in the neighbouring markets for the coarse cloths of which capes and flocatas are made.

Metzovo calls for more extended notice. This town, for it really deserves the name, was, according to Pouqueville, founded by a Vlakh colony as early as the tenth century. Following the same author, it contained in 1815 1,100 houses; Leake in 1805 set down the number at seven hundred; a more recent unofficial return, at eight hundred and fifty-four; and two years ago I was myself informed by the mudir of the place that the number then was seven hundred and seventy.

The name Metzovo, if derived, as some pretend, from Μεσῶ Βουνῶν, *Meso bounon,* (in the midst of the mountains), aptly suits a place situated in the midst of the lofty heights that group round the northern extremity of Pindus. Here, on the opposite flanks of a profound ravine, through which flows the Pindic branch of the Arta river, are the two *mahalls* into which Metzovo is divided; the one Προσήλιον, *Proselion,* is on the right bank, the other, Ανήλιον, *Anelion,* is on the left; the first contains six hundred and seventy houses, the second one hundred.

Metzovo is on the great highway between Thessaly and Epirus, one and a quarter *hour* distant from the ζύγος, *Zygos,* of Lacmon; its position must, therefore, have at all times assured to it considerable importance, not only as a commanding stronghold, but as a suitable halting-place for the carrying trade. We accordingly find that Metzovo has always occupied an important place in the modern annals of Epirus, and it is now the chief town of the Pindic Vlakhs. Leake states that like Calabrites and Syraku, it had secured the special protection of the Validè Sultan—such might have been the case; yet I cannot refrain from relating the popular story which attributes the rise and progress of Metzovo to the following romantic episode.

In the early part of the sixteenth century, a grand vizier, having incurred the displeasure of his master, fled from Constantinople, and found refuge in the hut of a Vlakh shepherd of Metzovo. After a few months the tidings of his recall to favour and to the grand vizierite reached him in his concealment. He returned to Constantinople, and his first thought, on being reinstated in power, was to reward the benefactor by whom he had been sheltered when in disgrace. At his invitation, the shepherd proceeded to Constantinople, and was rewarded with an Imperial firman, which guaranteed the following privileges to his native place.

I. That certain specified pastures situated in Macedonia, Thessaly and Epirus, should belong *in perpetuo* to the community of Metzovo.

II. That no Mussulman should settle within the borders of the community.

III. That the community should pay a fixed sum annually in lieu of all government dues.

IV. That their territory should be an inviolable asylum.

V. That all Mussulmans passing through their territory should regard the ground as sacred, and on quitting it should scrape their horse's hoofs, so as not to take away with them a particle of Metzovo soil.

VI. That their ecclesiastical affairs should be administered by a special exarch from the patriarch.

VII. That in civil matters they should be subject to the nomarch of Euripus in the Eubœa; and in judicial matters to the cadi of Livadia in Bœotia.

This last article, by placing the revising authorities at a distance, was intended to discourage appeals against their own municipal decisions.

These comprehensive privileges were extended to all the dependencies of Metzovo, which were then limited to four villages, situated within a circle of about three *hours* in diameter.

"Se non è vero è ben trovato." The story is at least a pretty one; but it is believed by many and fondly cherished by local vanity. In partial corroboration of it I may mention, that* in 1515 Sinan Pasha, grand vizier of Selim I, fell into disgrace, fled from Constantinople, and remained *perdu* in some unknown retreat until recalled to favour and vizierial dignity.

Admitting under reserve the truth of the story, it would follow that the privileged ground of Metzovo, notwithstanding its rugged character, and the rigour of the climate, soon became a centre of attraction, and from a scattered hamlet rapidly grew into a flourishing town in which Vlakh industry and manufactures were stimulated to their fullest development. The inhabitants became wealthy flockmasters: they monopolised the carrier trade over Pindus, and rivalled the people of Calabrites and Voskopolis in woollen manufactures: with few interruptions they continued in the enjoyment of their privileges until the close of the last century, when Ali Pasha, setting at nought Imperial grants and prescriptive rights, destroyed their charter, annulled their prerogatives and immunities, and reduced them to the common level of their neighbours.

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* De Hammer, vol. i, lib. xxiii, p. 426.

Whether or not all this is to be believed, Metzovo is now a thriving place. With its five dependent villages it contains about 1,200 families, of whom some are shepherds, some mechanics; but by far the greater number of the men are carriers, who, in the exercise of their calling, traverse every part of Thessaly, Epirus, and Macedonia. They are chiefly dependent for horses and mules upon their cousins of Zagori, who are well known at all the cattle fairs of Western Turkey, and extend their dealings as far as Bosnia, Servia, and Salonica.

A good many Metzovites resort to foreign countries as merchants. Of those who have acquired wealth several have made gifts or bequests to the community for charitable or educational purposes, which yield in the aggregate about £1000 a-year. With this sum, if fairly and judiciously employed, much good might be done; but it is to be feared that the Vlakhs, nowadays at least, offer no exception to the general character of municipal trustees in this country.

It is believed that the Vlakhs were pagans on their first arrival in Greece and Thessaly: at what time they embraced Christianity has not, that I am aware of, been determined. But for several centuries they have been staunch in their adherence to the Eastern church. Unlike their Albanian neighbours they have resisted the allurements of apostasy to the Moslem creed; and, though well fitted to enter the lists of ambition, they have preferred the cross and humility to the crescent with all its attendant honours. I can find no records of Vlakhs having risen to high posts in the Ottoman state, but many of them have become eminent as dignitaries of the eastern church, and have otherwise distinguished themselves in the narrow field open to Christians in Turkey.

Metzovo was formerly in the diocese of Meteora; it is now, with Calabrites and Syraku, included in the archbishopric of Janina. The southern Dessarets are subject to the Bishop of Greveno, the northern to the Bishop of Berat.

The Vlakh country is well dotted with monasteries. There are seven in the Jumerka district; the same number in Malacassia, including the monastery of Cossovitsa, about eight hours from Janina, on the road to Metzovo, where there is an annual fair of three days, beginning on the 15th of August, old style. The monasteries in the northern Vlakh districts are not less numerous than those in the south.

The sedentary Vlakhs seem to be fully sensible of the advantages of education. In every central village a school is maintained at the expense of the community. The course of instruction embraces modern Greek, reading, writing, and the first rules of arithmetic. As regards Greek, in the towns and

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large villages it has almost quite superseded the native dialect; it is gradually gaining ground in the remote villages, and it is quite familiar to those nomades who in winter descend with their flocks to Greek-speaking districts. The Αλβανιτόβλαχοι, *Albanitoblachi,* speak a corrupt patois of mingled Greek, Vlakh, and Albanian, or rather, perhaps, of Vlakh and Albanian, and their common appellation of κουτζόβλαχοι, *cutzoblachi* (lame Vlakhs), has reference, not to any defect of limb, but to the uncouth stumbling jargon in which they express themselves. The educated Vlakh is almost invariably distinguished by the grammatical accuracy and correct pronunciation with which he speaks Greek.

The solicitude of the Vlakhs in respect to education is still unhappily confined to the male sex. The Vlakh woman is treated as an inferior being, and from early years she is habituated to drudgery and toil. By her all the out-door work is performed of gardening, tillage, sowing, reaping, carrying, storing, etc.; she must go to the distant forest, cut her load of wood, sixty or seventy pounds weight, and fetch it home as best she can, over miles of breakneck country. All the household work devolves upon her, in addition to which she must spin, knit, and weave. I know not if the poor toil-worn creature has sensibility enough to be proud of her handywork, for her blankets, rugs, stockings, cloths and carpets, are superior to all others made in the country.

The Vlakh woman is naturally handsome and robust, but her beauty is marred by early toil; she soon becomes coarse, and hard usage anticipates the effects of old age. Having no idea of existence without labour, when the season precludes work at home, she seeks it elsewhere, not as an in-door servant, but as a ready hand for rough, out of door jobs of every kind. Numbers of Vlakh women come every autumn to Janina, where they contend with the Jews as street porters.

The aptitude of the Vlakhs for industrial pursuits has already been adverted to. I would only add that they are generally in good repute as carpenters, builders, and masons. The best *sarukhas,* or country shoes, are made by them. They endeavoured to rival the Greeks of Janina in embroidery, and they imitate, but do not equal, the Konitziotes in wood sculpture.

The Vlakhs are plain in dress; many of those who are in easy circumstances have adopted the western fashion; for with them, as with most others in Turkey, the "frock coat and trowsers" style is regarded as the emblem of Frank civilisation. But the common dress consists of a shirt and loose breeches of coarse white woollen cloth, a black sleeveless tunic, and the heavy goat's hair *kappa,* which is an ample protection against

wet and cold, and, winter and summer, is the only covering at night. A whitish conical felt cap and *saroukhas*, or else sandals of untanned hide, complete the dress. The better sort of persons, who retain the old-fashioned dress, replace the felt cap with a red fez, and indulge their tastes in shirts of better material and workmanship, in tight-fitting gaiters, and in a more expensive kind of tunic. The shepherds, from the dark colour of their capes, are commonly called *καραγουνίδες*, *caragunides*; let me here add that they are also named *πίστικὸς*, *pisticus*, from their known fidelity.*

The dress of the women is coarse, plain, and unbecoming in the extreme. It is said that in former times they were restricted by sumptuary laws from everything in the way of ornament or variety. As it is, their clothing is of the same material as that of the men, and in cut differs from it only in a scant petticoat, open half way up the sides to admit of freedom in walking. The gayest part of the dress are the stockings, which are of worsted, curiously wrought in horizontal stripes of different colours. Their only ornament is a *καμέρι*, *cameri*, or waist clasp, which is generally of imitation silver, and is sometimes extravagantly large, and on festal occasions the young unmarried women are allowed to decorate their heads with as many coins as they can procure.

Like all other pastoral tribes the Vlakhs have their music; and their favourite instrument is a pipe, *φλογέρα*, *phlogera*, made from the wing bone of the vulture. This pipe is open at both ends, and is pierced with six holes, all on the same side; it has no mouthpiece, and for an unpractised person is very difficult to fill. The player inserts the end into the *side* of the mouth, and produces notes which may be varied from sharp and shrill to soft and pleasing. The nomade Scythians of old used to play on a similar instrument. Its wild, irregular music seems to belong to antiquity; and, heard amid the shady solitudes of Pindus, it recalls the hoary times of dryad, faun, and satyr.

Amongst the various nationalities of Epirus, I consider the Vlakhs entitled to the foremost place. If inferior to the Greeks in 'cuteness, they are their masters in foresight, perseverance, and application. Reverting to their antecedents, a change of circumstances wrought a corresponding change in their pursuits, and by diverting their energies into new channels, remodelled their character, and converted the wandering barbarian into a peaceful citizen. But the lineaments of the old Vlakh are not yet lost among his nomade descendants: though

* Not from any special fidelity. Πιστικὸς, or "confidential man" is, next to *tchoban*, the common Greek word for shepherd nowadays. [S.]

quiet and inoffensive as a rule, when roused to action they give proofs of great daring and enterprise. In physical strength and patience of fatigue they are second to none; they are much feared as brigands; and in estimating the chances of a struggle in these parts, the mountaineers of Agrafa figure conspicuously in the account.

Of the future of these tribes it would be difficult, in the present state of things, to hazard a prophecy. There are forms of government which tend to perpetuate disunion and conditions of society which are opposed to the fusion of different races. Where such is the case an exclusive jealousy reciprocally prevails, and progress and civilisation are checked in their growth. But should the ardent aspirations of the Pindic Vlakh ever be realised, should he ever know the blessings of enlightened government, the invigorating influence of well-balanced freedom, the stimulus of encouragement, the assurance of impartial law and the confidence of protecting justice; should he ever be placed in this happy condition, he cannot fail, in the development and well-directed exercise of his attested energies, to attain a forward place in the pursuits of civilised life.

SUPPLEMENT.

The Vlakh shepherds are of two classes, namely, the hired shepherd and the nomade, who is an independent flockmaster. The Albanito Vlakhs are all nomades, and dwell in tents. The hired shepherds belong respectively to the communities that employ them. An active man of this class can look after as many as three hundred sheep. He is paid sometimes in money, sometimes by a share in the flock. When in money, besides a daily ration of bread, or an equivalent allowance, he receives two piastres (fourpence) a head for the period of his contract when it is for six months, and in proportion for a longer or shorter term.

In summer the shepherds wander with their charges over the mountains, keeping each within prescribed bounds. Early in October they begin their gradual migration to the plains, descending from level to level as urged on by the increasing cold behind them. Those of Calabrites and its dependencies make for the coast pastures opposite to Corfu; those of Metzovo and Aspropotamus to the plains of Tricalla; those of Zagori to the plain of Arta; while the southern Dessarets descend to the valley of the upper Vistritza (Haliacmon), and the nerthern to the plains about Kortza and the upper Devol. In these migrations the shepherds are accompanied by their lares and penates, by their wives, families and priests, and by num-

bers of large dogs, commonly called molossian, although that celebrated race is, I believe, to be found in its purity only with the Dessarets about Mount Smokka. In May commences the return to the mountains.

A FEW VLAKH WORDS.

English.	*Vlakh.*	*English.*	*Vlakh.*
God	Dhomne-zéu	Dog	kanè
The sun	soăre-le	Ox	boŭ
The moon	luna	Month	messa
Heat	kaloăre	Son	chiliu (filium)
Rain	ploaïe	Daughter	chilia (filia)
Snow	niao	Tongue	limba
Man	omu		
Woman	muliara	I do	faccu
Hand	mäna	Thou doest	fatsi
Blood	sändza	He does	fatsè
Head	kapu	We do	fatsiamu
Sheep	oae	Ye do	fatsetse
Horse	kallu	They do	fatsou

XXVII.—*On the Origin of Civilisation and the Primitive Condition of Man.* By Sir John Lubbock, Bart., F.R.S., Pres. Ent. Soc.

[*Read Nov. 26th*, 1867.]

Side by side with the different opinions whether man constitutes one, or many species, there are two opposite views as to the primitive condition of the first men, or first beings worthy to be so called.

Many writers have considered that man was at first a mere savage, and that our history has on the whole been a steady progress towards civilisation, though at times, and at some times for centuries, some races have been stationary, or even have retrograded. Other authors, of no less eminence, have taken a diametrically opposite view. According to them, man was, from the commencement, pretty much what he is at present; if possible, even more ignorant of the arts and sciences than now, but with mental qualities not inferior to our own. Savages they consider to be the degenerate descendants of far superior ancestors. Of the recent supporters of this theory, the late Archbishop of Dublin was amongst the most eminent.

In the present paper I propose briefly to examine the reasons which led Dr. Whately to this conclusion, and still more briefly to notice some of the facts which seem to me to render it untenable. Dr. Whately enunciates his opinions in the following words:*—

"That we have no reason to believe that any community ever did, or ever can emerge, unassisted by external helps, from a state of utter barbarism unto anything that can be called civilisation." "Man has not emerged from the savage state; the progress of any community in civilisation, by its own internal means, must always have begun from a condition removed from that of complete barbarism; out of which, it does not appear, that men ever did or can raise themselves."

One might at first feel disposed to answer, that fifty cases could be cited which altogether discredit this assertion; and without going beyond the limits of our own island, we might regard the history of England itself as a sufficient answer to such a statement. Archbishop Whately, however, was far too skilful a debater not to have foreseen such an argument. "The

* Whately, *Political Economy*, p. 68.

ancient Germans," he says, "who cultivated corn,—though their agriculture was probably in a very rude state,—who not only had numerous herds of cattle, but employed the labour of brutes, and even made use of cavalry in their wars, . . . these cannot with propriety be reckoned savages; or if they are to be so called (for it is not worth while to dispute about a word), then I would admit that, in this sense, men may advance, and in fact have advanced by their own unassisted efforts, from the savage to the civilised state." This limitation of the term "savage" to the very lowest representatives of the human race, no doubt, renders Dr. Whately's theory more tenable, by increasing the difficulty of bringing forward conclusive evidence against it. The archbishop, indeed, expresses himself throughout his argument as if it would be easy to produce the required evidence in opposition to his theory, supposing that any race of savages ever had raised themselves to a state of civilisation. The manner in which he has treated the case of the Mandans, —a tribe of North American Indians,—however, effectually disposes of this hypothesis. This unfortunate people is described as having been decidedly more civilised than those by which they were surrounded. Having, then, no neighbours more advanced than themselves, they were quoted as furnishing an instance of savages who had civilised themselves without external aid. In answer to this, Archbishop Whately asks,—

"1st. How do we know that these Mandans were of the same race as their neighbours?

"2ndly. How do we know that theirs is not the original level from which the other tribes have fallen?

"3rdly, and lastly. Supposing that the Mandans did emerge from the savage state, how do we know that this may not have been through the aid of some strangers coming among them, —like the Manco-Capac of Peru, from some more civilised country, perhaps, long before the days of Columbus?"

Supposing, however, for a moment, and for the sake of argument, that the Mandans, or any other race, were originally savages, and had civilised themselves, it would still be manifestly—from the very nature of the case—impossible to bring forward the kind of evidence demanded by Dr. Whately. No doubt he "may confidently affirm that we find no one *recorded* instance of a tribe of savages, properly so styled, rising into a civilised state without instruction and assistance from a people already civilised." Starting with the proviso that savages, properly so styled, are ignorant of letters, and laying it down as a condition that no civilised example should be placed before them, the existence of any such record is an impossibility: its very presence would destroy its value. In another passage,

Archbishop Whately says, indeed, "If man generally, or some particular race, be capable of self-civilisation, in either case it may be expected that some record, or tradition, or monument, of the actual occurrence of such an event, should be found." So far from this, the existence of any such record would, according to the very hypothesis itself, be impossible. Traditions are short-lived and untrustworthy. A "monument" which could prove the actual occurrence of a race capable of self-civilisation, I confess myself unable to imagine. What kind of a monument would the archbishop accept as proving that the people which made it had been originally savage? that they had raised themselves, and had never been influenced by strangers of a superior race? Evidently the word "monument" in the above passage was used only to round off the sentence. But, says Archbishop Whately, "We have accounts of various savage tribes, in different parts of the globe, who have been visited from time to time at considerable intervals, but have had no settled intercourse with civilised people, and who appear to continue, as far as can be ascertained, in the same uncultivated condition"; and he adduces one case, that of the New Zealanders, who "seem to have been in quite as advanced a state when Tasman discovered the country in 1642, as they were when Cook visited it one hundred and twenty-seven years after."

We have been accustomed to see around us an improvement so rapid that we forget how short a period a century is in the history of the human race. Even taking the ordinary chronology, it is evident that if in 6,000 years a given race has only progressed from a state of utter savagery to the condition of the Australian, we could not expect to find much change in one more century. Many a fishing village, even on our own coast, is in very nearly the same condition as it was one hundred and twenty-seven years ago. Moreover, I might fairly answer that, according to Whately's own definition of a savage state, the New Zealanders would certainly be excluded. They cultivated the ground, they had domestic animals, they constructed elaborate fortifications and made excellent canoes, and were certainly not in a state of utter barbarism. Or I might argue that a short visit, like that of Tasman, could give little insight into the true condition of a people. I am, however, the less disposed to question the statement made by Archbishop Whately, because the fact that many races are now practically stationary, is in reality an argument against the theory of degradation, and not against that of progress. Civilised races, say we, are the descendants of races which have risen from a state of barbarism. On the contrary, argue our opponents,

savages are the descendants of civilised races, and have sunk to their present condition. But Archbishop Whately admits that the civilised races are still rising, while the savages are now stationary; and, oddly enough, seems to regard this as an argument in support of the very untenable proposition, that the difference between the two is due not to the progress of the one set of races,—a progress which everyone admits,—but to the degradation of those whom he himself maintains to be stationary. The delusion is natural, and like that which every one must have sometimes experienced in looking out of a train in motion, when the woods and fields seem to be flying from us, whereas we know that in reality we are moving and they are stationary.

But it is argued, "If man, when first created, was left, like the brutes, to the unaided exercise of those natural powers of body and mind which are common to the European and to the New Hollander, how comes it that the European is not now in the condition of the New Hollander?" I am, indeed, surprised at such an argument. In the first place, Australia possesses neither cereals nor any animals which can be domesticated with advantage; and in the second, we find even the same family, among children of the same parents, the most opposite dispositions; in the same nation, there are families of high character, and others in which every member is more or less criminal. But in this case, as in the last, the archbishop's argument, if good at all, is good against his own view. It is like an Australian boomerang, which recoils upon its owner. The archbishop believed in the unity of the human race, and argued that man was originally civilised (in a certain sense). "How comes it then," I might ask him, "that the New Hollander is not now in the condition of the European." In another passage, Archbishop Whately quotes, with approbation, a passage from President Smith, of the college of New Jersey, who says that man, "cast out an orphan of nature, naked and helpless, into the savage forest, must have perished before he could have learned how to supply his most immediate and urgent wants. Suppose him to have been created, or to have started into being, one knows not how, in the full strength of his bodily powers, how long must it have been before he could have known the proper use of his limbs, or how to apply them to climb the tree," etc. etc. Exactly the same, however, might be said of the gorilla or the chimpanzee, which certainly are not the degraded descendants of civilised ancestors.

Having thus very briefly considered the arguments brought forward by Archbishop Whately, I will proceed to state, also very briefly, some facts which seem to militate against the view advocated by him.

Firstly, I will endeavour to show that there are indications of progress even among savages.

Secondly, That among the most civilised nations there are traces of original barbarism.

The archbishop supposes that men were, from the beginning, herdsmen and cultivators. We know, however, that the Australians, North and South Americans, and several other more or less savage races, living in countries eminently suited to our domestic animals, and to the cultivation of cereals, were yet entirely ignorant both of the one and the other. It is, I think, improbable that any race of men, who had once been agriculturists and herdsmen, should entirely abandon pursuits so easy and advantageous; and it is still more improbable that if we accept Usher's very limited chronology, all tradition of such a change should he lost. Moreover, even if the present colonists of (say) America or Australia were to fall into such a state of barbarism, we should still find in those countries herds of wild cattle descended from those imported; and even if these were exterminated, still we should find their remains, whereas we know that not a single bone of the ox or of the domestic sheep has been found either in Australia or in America. The same argument applies to the horse, as the first horse of South America does not belong to the domestic race. So again in the case of plants. We do not know that any of our cultivated cereals would survive in a wild state, though it is highly probable that, perhaps, in a modified form they would do so. But there are many other plants which follow in the train of man, and by which the botany of South America, Australia, and New Zealand, has been almost as profoundly modified, as their ethnology has been, by the arrival of the white man. The Maoris have a melancholy proverb, that the Maoris disappear before the white man, just as the white man's rat destroys the native rat; the European fly drives away the Maori fly; and the clover kills the New Zealand fern.

A very interesting paper on this subject by Dr. Hooker, whose authority no one will question, is contained in the *Natural History Review for* 1864:—"In Australia and New Zealand," he says, "for instance, the noisy train of English emigration is not more surely doing its work, than the stealthy tide of English weeds, which are creeping over the surface of the waste, cultivated, and virgin soil, in annually increasing numbers of genera, species, and individuals. Apropos of this subject, a correspondent W. T. Locke Travers, Esq., F.L.S., a most active New Zealand botanist, writing from Canterbury, says, 'You would be surprised at the rapid spread of European and foreign plants in this country. All along the sides of the

main lines of road through the plains, a *Polygonum* (*aviculare*), called cow-grass, grows most luxuriantly, the roots sometimes two feet in depth, and the plants spreading over an area from four to five feet in diameter. The dock (*Rumex obtusifolius*), or *R. crispus*) is to be found in every river-bed, extending into the valleys of the mountain-rivers, until these become mere torrents. The sow-thistle is spread all over the country, growing luxuriantly nearly up to 6,000 feet. The watercress increases in our still rivers to such an extent as to threaten to choke them altogether.' " The Cardoon of the Argentine Republics is another remarkable instance of the same fact. We may therefore safely assume that if Australia, New Zealand, or South America had ever been peopled by a race of herdsmen and agriculturists, the fauna and flora of those countries would almost inevitably have given evidence of the fact, and differed much from the condition in which they were discovered. We may also assert, as a general proposition, that no weapons or implements of metal have ever been found in any country inhabited by savages wholly ignorant of metallurgy. A still stronger case is afforded by pottery. Pottery is not easily destroyed; when known at all it is always abundant, and it possesses two qualities,—those, namely, of being easy to break and yet difficult to destroy, which render it very valuable in an archæological point of view. Moreover it is, in most cases, associated with burials. It is, therefore, a very significant fact, that no fragment of pottery has ever been found in Australia, New Zealand, or the Polynesian islands. It seems to me extremely improbable that an art so easy and so useful should ever have been lost by any race of men. Moreover, this argument applies to several other arts and instruments. I will mention only two, though several others might be brought forward. The art of spinning and the use of the bow are quite unknown to many races of savages, and yet would hardly be likely to have been abandoned when once known. The absence of architectural remains in these countries is another argument. Archbishop Whately, indeed, claims this as being in his favour; but the absence of monuments in a country is surely indicative of barbarism, and not of civilisation.

The mental condition of savages seems also to me to speak strongly against the "degrading" theory. Not only do the religions of the low races appear to be indigenous, but according to almost universal testimony,—that of merchants, philosophers, naval men, and missionaries alike,—there are many races of men who are altogether destitute of a religion. The cases are, perhaps, less numerous than they are asserted to be; but some of them rest on good evidence. Yet I feel it difficult

to believe that any people, which once possessed a religion, would ever entirely lose it. Religion appeals so strongly to the hopes and fears of men, it takes so deep a hold on most minds, it is so great a consolation in times of sorrow and sickness, that I can hardly think any nation would ever abandon it altogether. Moreover, it produces a race of men who are interested in maintaining its influence and authority. Where, therefore, we find a race which is now ignorant of religion, I cannot but assume that it has always been so.

I will now proceed to mention a few cases in which some improvement does appear to have taken place. According to MacGillivray, the Australians of Port Essington who, like all their fellow-countrymen, had formerly bark canoes only, have now completely abandoned them for others hollowed out of the trunk of a tree, which they buy from the Malays. The inhabitants of the Andaman Islands have recently introduced outriggers. The Bachapins, when visited by Burchell, had just commenced working iron. According to Burton, the Wajiji negroes have recently learned to make brass. In Tahiti, when visited by Captain Cook, the largest morai, or burial place, was that erected for the then reigning queen. The Tahitians, also, had then very recently abandoned the habit of cannibalism. Moreover, there are certain facts which speak for themselves. Some of the North American tribes cultivated the maize. Now the maize is a North American plant; and we have here, therefore, clear evidence of a step in advance made by these tribes. Again, the Peruvians had domesticated the llama. Those who believe in the diversity of species of men, may endeavour to maintain that the Peruvians had domestic llamas from the beginning. Archbishop Whately, however, would not take this line. He would, I am sure, admit that the first settlers in Peru had no llamas, nor, indeed, any other domestic animal, excepting, probably, the dog. The bark-cloth of the Polynesians is another case in point. Another very strong case is the boomerang of the Australians. This weapon is known to no other race of men.* We cannot look on it as a relic of primæval civilisation, or it would not now be confined to one race only. The Australians cannot have learnt it from any civilised visitors for the same reason. It is, therefore, as it seems to me, exactly the case we want, and a clear proof of a step in advance,—a small one if you like, but still a step made by a people whom Archbishop Whately would certainly admit to be true savages. The rude substitutes for writing found among various tribes, the wam-

* With one doubtful exception.

pum of the North American Indians, the picture-writing and Quippu of Central America, must be regarded as of native origin. In the case of the system of letters invented by Mohammed Doalu, a negro of the Vei country in West Africa, the idea was no doubt borrowed from the missionaries, although it was worked out independently. In other cases, however, this cannot, I think, be maintained. Take the case of the Mexicans. Even if we suppose that they are descended from a primitively civilised race, and had gradually and completely lost both the use and tradition of letters,—to my mind, by the way, a most improbable hypothesis,—still we must look on their system of picture-writing as being of American origin. Even if a system of writing by letters could ever be altogether lost, which I doubt, it certainly could not be abandoned for that of picture-writing, which is inferior in every point of view. If the Mexicans had owed their civilisation, not to their own gradual improvement, but to the influence of some European visitors driven by stress of weather, or the pursuit of adventure, on to their coasts, we should have found in their system of writing, and in other respects, unmistakable proofs of such an influence. Although, therefore, we have no historical proof that the civilisation of America was indigenous, we have in its very character evidence, perhaps, more satisfactory than any historical statements would be. The same argument may be derived from the names used for numbers by savages. I feel great difficulty in supposing that any race which had learnt to count up to ten, would ever unlearn a piece of knowledge so easy and yet so useful. Yet we know that few, perhaps none, of those whom Archbishop Whately would call savages, can count so far. No Australian language contained numerals for any number beyond four; the Dammaras and Abipones use none beyond three; some of the Brazilian tribes cannot go beyond two.

In many cases where the system of numeration is at present somewhat more advanced, it bears on it the stamp of native and recent origin. Among civilised nations, the derivations of the numerals have long since been obscured by the gradual modification which time effects in all words: especially those in frequent use, and before the invention of printing. And if the numerals of savages were relics of a former civilisation, the waifs and strays saved out of the general wreck, though we could not expect to trace them up to that original language, which in such a case must have existed; yet we certainly should not find them such as they really are. I cannot, of course, here give to this argument all the development of which it is capable, or bring forward all the cases in point; but I will

quote a short passage from a very interesting lecture, delivered before the Royal Institution, by my friend, Mr. Tylor, in which some of the facts are clearly stated:—"Among many tribes of North and South America and West Africa are found such expressions as—for 5, 'a whole hand,' and for 6, 'one to the other hand;' 10, 'both hands,' and 11, 'one to the foot;' 20, 'one Indian,' and 21, 'one to the hands of the other Indian;' or for 11, 'foot one;' for 12, 'foot 2;' for 20, 'a person is finished;' while among the miserable natives of Van Diemen's Land, the reckoning of a single hand, viz. 5, is called *puganna*, 'a man.'" For displaying to us the picture of the savage counting on his fingers, and being struck with the idea that if he describes in words his gestures of reckoning, these words will become a numeral, perhaps no language approaches the Zulu. Counting on his fingers, he begins always with the little finger of his left hand, and thus reaching 5 he calls it "a whole hand"; for 6, he translates the appropriate gesture, calling it *tatisitupa*, "take the thumb"; while 7, being shown in gesture by the forefinger, and this finger being used to point with, the verb *komba*, "to point", comes to serve as a numeral expression, denoting 7. Here then, surely, we have just the evidence which Archbishop Whately required. These numerals are recent, because they are uncorrupted; and they are indigenous, because they have an evident meaning in the language of the tribes by whom they are used.

Again, we know that many savage languages are entirely deficient in such words as "colour", "tone", "tree", etc., having names for each kind of colour, every species of tree, but not for the general idea. I can hardly imagine a nation losing such words, if it had once possessed them.

Other similar evidence might be extracted from the language of savages; and arguments of this nature are entitled to more weight than statements of travellers, as to the objects found in use among savages. Suppose, for instance, that an early traveller mentioned the absence of some art or knowledge among a race visited by him, and that later ones found the natives in possession of it. Most people would hesitate to receive this as a clear evidence of progress, and rather be disposed to suspect that later travellers, with perhaps better opportunities, had seen what their predecessors had overlooked. This is no hypothetical case. The early Spanish writers assert that the inhabitants of the Ladrone Islands were ignorant of the use of fire. Later travellers, on the contrary, find them perfectly well acquainted with it. They have, therefore, almost unanimously assumed, not that the natives had made a step in advance, but that the Spaniards had made a mistake; and I

have not brought this case forward in opposition to the assertions of Whately, because I am inclined to be of this opinion myself. I refer to it here, however, as showing how difficult it would be to obtain satisfactory evidence of material progress among savages, even admitting that such exists. The arguments derived from language, however, are liable to no such suspicions; but tell their own tale, and leave us at liberty to draw our conclusions. I will now very briefly refer to certain considerations which seem to show that even the most civilised races were once in a state of barbarism.

Not only throughout Europe,—not only in Italy and Greece,—but even in the so-called cradle of civilisation itself, in Palestine, and Syria, in Egypt, and in India, the traces of a stone age have been discovered. It may, indeed, be said that these were only the fragments of those stone knives, etc., which we know were used in religious ceremonies long after metal was in general use for secular purposes. This, indeed, reminds one of the attempt to account for the presence of elephants' bones in England, by supposing that they were the remains of elephants which might have been brought over by the Romans. But why were stone knives used by the Egyptian and Jewish priests? evidently because they had been at one time in general use, and there was a feeling of respect which made them reluctant to use the new substance in religious ceremonies.

There are, moreover, other considerations which point very decidedly to the same conclusion. It is well known that among various savage tribes female virtue is looked on with a very indifferent eye. Some savages have not—I will not say have not arrived at—the idea of marriage. I need not here bring forward the evidence in support of this statement; everyone who has taken any interest in the lower races of men, will admit that a savage's wives are in many races a mere part of his property, as much so as his dog or his male slaves; and hence, when a man dies, his brother takes possession of the widows, together with the rest of the property. In those cases, where women are treated with rather more justice, the first results are, according to our ideas, of doubtful advantage. Among the Andaman islanders, for instance, the man and woman remain together only until the child is born and weaned, when they are free to separate and pair with others. In other cases, marriage may be terminated at the wish either of the husband or wife. In others, again, the tie is of such a nature that it affords not even a presumption as to parentage. The result of this is, that many savages have no idea of any relationship by paternity; they recognise kinship through the female line only. Traces of this occur among the Australians,

the Fijians, and indeed the South Sea islanders generally, the ancient Celts, Greeks, the Kasias, Nairs, and other tribes in Hindostan, some of the Cossack hordes, many Negro tribes, etc., etc., and, in short, all over the world. For the same reason, a man's heirs are not his own children, but those of his sisters; while probably again from the same reason, the Wanyamwezi have the (at first sight inexplicable) custom,* that a man's property goes to his illegitimate children, and not to his lawful offspring.

Thus, then, by tracing up the gradual construction of the idea of marriage, we can fully account for the two extraordinary customs which we find in every part of the world,—that a man is regarded by various tribes as no relation to his own children, and that his property goes not to them, but to those of his sisters. As things improved, and the probability of parentage became greater, kinship through females only would gradually be abandoned. Many savages have not yet advanced so far; others have recently made the change; as for instance, the Ait-Iraten, who did so less than a century ago, and erected a stone pillar in memory of the event. Even, however, among the most civilised nations we find, in early history, traces of this progression. Thus, among the early Jews, Abraham married his half-sister. Nabor married his brother's daughter, and Amram married his father's sister: here we see the system of kinship through females only. These women were not, at that time, regarded as relatives, though at a later period in Jewish history they would have been so. The custom that when a man died childless, his brother married the widow, is another case in point; as also is the touching story of Ruth and Boaz, and the sad history of Tamar. Similar considerations, as Mr. McLennan points out in his excellent book, prove that the Romans were "at one time *in pari passu* as regards the administration of justice with many races, which we find ignorant of legal proceedings, and dependent for the settlement of their disputes on force of arms, of the good offices of friends"; while, as regards marriage, we find customs both among the Greeks and Romans, which point back to the time when those polished peoples were themselves mere savages. Even among ourselves, a man is, in the eye of the law, no relation to his own children unless they are born in wedlock. He is related to his own offspring not by blood, but through his marriage with the mother. If marriage has not taken place, they have no right to his name; and should he leave them any of his property, the State steps in,

* Burton's *Lake Regions of Africa*, p. 198.

and claims one-tenth, as in cases where money is left to those who are no relations.

Thus, then, we can trace up, among races in different degrees of civilisation, every step, from the treatment of woman as a mere chattel, to the sacred idea of matrimony as it exists among ourselves; and we find clear evidence that the gradual change has been one of progress, and not of degradation. Civilised nations long retain traces of their ancient barbarism; barbarous ones, no relics of previous chivalry. As the valves in the veins indicate the direction of the circulation; so can we trace the gradual progress of respect for women, which is one of the noblest features of our modern civilisation.

Before quitting this interesting subject, I may add, that many nations have traditions of the origin of marriage. Among the Egyptians it is attributed to Menes; among the Chinese to Fohi, the Greeks to Cecrops; the Hindus to Svetaketu. If the idea of marriage had been coeval with our race,—if marriage had always appeared as natural, I might say as necessary, as it does to us,—such traditions could scarcely have arisen.

In the publications of the Nova Scotian *Institute of Natural Science* is an interesting paper, by Mr. Haliburton, on "The Unity of the Human Race, proved by the universality of certain Superstitions connected with Sneezing." "Once establish," he says, "that a large number of arbitrary customs—such as could not have naturally suggested themselves to all men at all times—are universally observed, and we arrive at the conclusion that they are primitive customs, which have been inherited from a common source; and if inherited, that they owe their origin to an era anterior to the dispersion of the human race." To justify such a conclusion, the custom must be demonstrably arbitrary. The belief that two and two make four, the division of the year into twelve months, and similar coincidences, of course prove nothing; but I very much doubt the existence of any universal, or even general, custom of a clearly arbitrary character. The fact is that many things appear to us arbitrary and strange, because we live in a condition so different from that in which they originated. Many things seem natural to a savage, which to us appear absurd and unaccountable.

Mr. Haliburton brings forward, as his strongest case, the habit of saying "God bless you," or some equivalent expression, when a person sneezes. He shows that this custom, which I admit appears to us at first sight both odd and arbitrary, is ancient, and widely extended. It is mentioned by Homer, Aristotle, Apuleius, Pliny, and the Jewish rabbis, and has been observed in Florida, in Otaheite, and in the Tonga islands.

That it is not arbitrary, however, Mr. Haliburton himself shows; and it does not, therefore, come under his rule.

A belief in invisible beings is very general among savages; and while they think it unnecessary to account for blessings, they attribute any misfortune to the illwill of these mysterious beings. Many savages regard disease as a case of possession. In cases of illness, they do not suppose that the organs are themselves affected, but that they are being devoured by a god; hence, their medicine-men do not try to cure the disease, but to extract the demon. Some tribes have a distinct deity for every ailment. The Australians do not believe in natural death. When a man dies, they take it for granted that he has been destroyed by witchcraft, and the only doubt is, who is the culprit. Now, a people in this state of mind,—and we know that almost every race of men is passing, or has passed through this stage of development,—seeing a man sneeze, would naturally, and almost inevitably, suppose that he was attacked and shaken by some invisible being: equally natural is the impulse to appeal for aid to some other invisible being more powerful than the first.

Mr. Haliburton admits that a sneeze is "an omen of impending evil", but it is more; it is evidence which, to the savage mind, would seem conclusive that the sneezer was possessed by some evil disposed spirit; evidently, therefore, this case, on which Mr. Haliburton so much relies, is by no means an "arbitrary custom", and does not, therefore, fulfil the conditions which he himself laid down. He has incidentally brought forward some other instances, most of which labour under the disadvantage of proving too much. Thus he instances the existence of a festival in honour of the dead "at or near the beginning of November". Such a feast is very general; and as there are many more races holding such a festival than there are months in the year, it is evident that, in several cases, they must be held together. But Mr. Haliburton goes on to say, "The Spaniards were very naturally surprised at finding that, while they were celebrating a solemn mass for All Souls, on the 22nd of November, the heathen Peruvians were also holding their annual commemoration of the dead." This curious coincidence would, however, not only prove the existence of such a festival, as he says, "before the dispersion" (which Mr. Haliburton evidently looks on as a definite event, rather than as a gradual process), but also that men were, at that epoch, sufficiently advanced to form a calendar, and keep it unchanged down to the present time. This, however, we know was not the case. Mr. Haliburton again says, "the belief in Scotland and equatorial Africa is found

to be almost precisely identical respecting there being ghosts, even of the living, who are exceedingly troublesome and pugnacious, and can be sometimes killed by a silver bullet." Here we certainly have what seems at first sight to be an arbitrary belief; but if it proves that there was a belief in ghosts of the living before the dispersion, it also proves that silver bullets were then in use. This illustration is, I think, a very interesting one; because it shows that similar ideas, in distant countries, owe their origin not "to an era before the dispersion of the human race", but to the original identity of the human mind. While I do not believe that similar customs in different nations are "inherited from a common source", or are necessarily primitive; I certainly do see in them an argument for the unity of the human race, which, however (be it remarked in a parenthesis), is not necessarily the same thing as the descent from a single pair.

In conclusion then, while I do not mean for a moment to deny that there are cases in which nations have retrograded, I regard these as exceptional instances. The facts and arguments which I have here very briefly indicated, might have been supported by many other illustrations. They however, I think, afford strong grounds for the following conclusions; namely,—

That existing savages are not the descendants of civilised ancestors.

That the primitive condition of man was one of utter barbarism.

That from this condition several races have independently raised themselves.

These views follow, I think, from strictly scientific considerations. We shall not, however, be the less inclined to adopt them, on account of the cheering prospects which they hold out for the future.

If the past history of man has been one of deterioration, we have but a groundless expectation of future improvement; but on the other hand, if the past has been one of progress, we may fairly hope that the future will be so too; that the blessings of civilisation will not only be extended to other countries and other nations, but that even in our own land they will be rendered more general and more equable, so that we shall not see before us always, as now, multitudes of our own fellow-countrymen living the life of savages in our very midst; neither possessing the rough advantages and real though coarse pleasures of savage life, nor yet availing themselves of the far higher and more noble opportunities which lie within the reach of civilised man.

XXVIII.—*On the Origenes of the Norsemen.* By H. H. Howorth, Esq.

[*Read December* 10*th*, 1867.]

In a paper I had the honour of reading at Dundee, I endeavoured to show how differently we must view the ancient features of Scandinavia, in order to appreciate its influence in the distribution of the ancient inhabitants of Europe. I now proceed to an examination and analysis of some of the problems in ethnology with which it is connected.

There is little more puzzling in that science than the sudden appearance in the eighth and ninth centuries, in distantly removed districts, of swarms of rovers, bearing the names of Vikingr, Danes, Northmen, or Normans, with a strange language, creed, and customs, hailing from the Baltic, and apparently bearing with them few historical traditions. Till the critical science of very late times, inquirers were content to have brought them from the north, or the northern hive, to hold it fruitless to attempt their earlier identification in history, or to give any account of their earlier movements.

Their appearance on the coasts of Ireland, England, Iceland, and France, if we are to credit a pretty well received account, was almost simultaneous,—the respective dates of such invasions being comprised within a period of thirty years. They came everywhere as strangers, and as enemies of the most savage character; they came, too, with weapons and ornaments of a comparatively high degree of finish and artistic taste; with an alphabet and mode of writing of a peculiar and individual character. They were recognised by the Saxons and the Franks, not as old neighbours from the mother country, whence these latter came, and well known to them, but as new acquaintances. They had a maritime vigour and knowledge, which no ingenuity can suppose was suddenly developed (to the compassing of the marvellous feats they performed, in the few years terminating the eighth century), among a long resident and previously immobile people.

Hallam and others find a cause for their sudden activity, and for their ferocity in the Saxon wars of Charlemagne, which are supposed to have sent many of the chiefs of that race beyond the pale of Germany: whence, for two centuries, they repaid the fearful decimation of their race by becoming the gadflies on the sides of all Europe. I hold this view to be untenable.

The Danes and Northmen were very much superior in culture to the Saxons of the Elbe, and in many respects to the Franks of Charlemagne. Their own legends, epics, and war songs, contain no allusions to such a tempting and suggestive source, and they breathe the spirit of another set of traditions altogether. I hold that the only explanation of their many peculiar characteristics is to be found in the fact of their having been but late immigrants into the area whence they emerged so powerfully and so suddenly.

If we examine our authorities, we shall find this view at least consistent with what they relate. Putting aside Pliny, who tells us comparatively nothing of the inhabitants of Scania, the first of these authorities is Ptolemy. He names the Chadini, the Phavonæ, the Phiræsi, the Gutæ, the Dauciones, and the Levoni, as living there. Of these, the Chadini and the Phavonæ are *names* only to myself. The Phiræsi have, with some show of probability, been identified, by Dr. Latham, with the Friesians, whom he shows to have had a large extension in early times, and to have been encroached upon on all sides by the later Danes. The Gutæ are, I suppose, the Goths of Gothland in Scania, a race which modern criticism has disentangled from much false relationship, and which was far from being Norse. The Dauciones bear an obscure name, to be correlated, perhaps, with the Daci of Trajan: the affinities implied in this are certainly not Norse. The Levoni were, I presume, the ancestors of the Livonians, a Finnic race. The Gutæ of Scania were represented in Denmark by the Jutes, who gave its name to Jutland. In all this we may have only negative evidence; but considering the individuality of the Norse race, and the facts about it, which I shall presently adduce, I cannot bring myself to believe that it was included in the enumeration of Ptolemy, or that it could have been excluded if then dwelling there.

We now enter upon a confused period, for I am next going to approach the era of the breaking up of the Roman empire. The causes which led to the vast migrations of the frontier races, have been variously assigned. I confess to a weakness for the respectably orthodox one, that it was by the continuous pressure of one wave on another, backed up at the end by some turbulent and warlike race. I cannot think that this was so sudden, however, as is often supposed. The Rhine was unquestionably a barrier which, when once broken, seemed to let in, all at once, a torrent of barbarous peoples. Beyond the Rhine, however, the pressure of wave on wave had been of long standing,—one wave overrunning another and inducing a mixture of races and a shading off of distinctions, till we find the armies of Alaric and of Attila composed of apparently im-

possible elements, representing pretty faithfully the heterogeneous mixture of types east of the Rhine. Among these races the chief, of course, are those which are generally classed as of the Teutonic family, Saxons, Franks, Goths, *et ejusdem generis*, almost entirely, be it remembered, if not altogether, Low Germans. A very curious inquiry, which has not been much pursued, is the explanation of the traditions, genealogical and religious, which are common to these same Low Germans, with the Norsemen with whom we are interested at present, whence came this common fund of tradition,—this common history. It is unquestionable that the nearest allied language to the Scandinavian now existing, or of which we have any traces, is the Friesic, one of the most widely disseminated at the dawn of our information, and which, if Latham's conjectures be upheld, extended beyond Denmark into Scania. The differentiæ of Friesic and of Norse might afford some answer.

I am one of those who are convinced that distinct species of language are but the inventions of our profound ignorance of the earlier migrations and history of so-called races. That languages are subject to development, and change of a very rapid character, under certain circumstances, is, I suppose, an axiom. That this development and change will tend in different directions in isolated areas is as well established. That the same race coming in contact at two points, with two races thus isolated, will acquire from each, at different points of its extension, distinct peculiarities, connecting such points with their conterminous neighbours, is too probable to need proofs. Will such an explanation help us to understand the peculiarities of the Norse and Saxon, or Friesic languages? Can their common vocabulary and forms be referred to a not remotely identical origin, and their differences to the effects of intercourse with different neighbours? The neighbours of the Norsemen would be the Fins, on the one hand; the Lithuanians, or old Prussians, on the other. The Friesians would have the younger branch of the Celts before them, and behind them the above-named wide-spread race, which it is convenient to refer to, as the Lithuanians or, perhaps better, as the Wends.

The question therefore is, would a Finnic influence account for the peculiarities of Norse, on the one hand, and would a Cymraeg influence account for the distinguishing characteristics of the Low German tongues, on the other? This is a question of immediate interest to many beside ethnologists,—to all who wish to trace our language to earlier fountain heads than Anglo-Saxon, and to all who are dissatisfied with the hard sharp lines of distinction which mark almost universally the classification

of knowledge in its earlier and primitive stages, and which are still the favourite landmarks of philology. I believe it will; and I hope to produce my evidence in another place, and on another occasion.

Having accounted for the distinctions between Norse and the Low German languages, and found reason to trace the main characteristics of each to the same source, we have cleared away one difficulty but to face another. If we fail to find Scandinavia inhabited by Norsemen in the third century, we cannot surely deny the presence of their relatives, the Low Germans, at least, on the borders of the Rhine at a much earlier period. The Belgæ,—who inhabited the Frank area in the days of Cæsar, and who have been the chief bone of contention between Celts and Germans,—I contend, in the days of the Roman conqueror, were Cymraeg, almost perhaps to a typical degree. Yet unquestionably there, as in the vast regions of the Boii, there had begun to be already infused among them an alien or foreign element, to which the name of German is applied by Cæsar, and which consisted of Low Germans alone. This infusion, I consider, became, if not stronger, at least more marked; if it did not alter the blood of the population to any very great extent, it did alter its language, its manners, and its traditions, until the change had effected the creation of the characteristic Saxon and Frank types.

Judging from analogies in Britain, I should say that this new element in the population is to be described rather as a caste than as a general infusion. The chiefs, the warriors, the leading race, the families, belonged to the new and hardy and more developed herd, the labourers, the common soldiers, belonged to the old race, who were on the soil before. This analogy is more than a fanciful one,—it is a part of a great law of human distribution, by which the uppermost layers of its society are recruited and furnished. The explanation of the facts, which I would suggest, as the one meeting the greatest number of requirements, is that from an early date, perhaps from a date considerably earlier than the German campaign of Cæsar, a gradual emigration westward of a Teutonic people, by slow degrees, was changing the type of the inhabitants, and that this change of type had received its highest development in this direction, probably, in the time of Alaric. That then, this mixed race leavened deeply with Teutonic features, extended beyond the Elbe, beyond the further islands of Jutland, and probably in some degree affected the Gutes of South Sweden, whom I agree with Dr. Latham in considering as showing a greater affinity to Lithuanic blood than to that which we are accustomed to associate with the name Goth, at least in early

times. I have said that these immigrants—who more for convenience than as pledging myself to any popular theory,—I call Teutons, constituted the higher ranks of the society of the extra Roman area, and held a common ancestry with the Norsemen, as a portion of their traditional faith.

I have now prepared the ground for the introduction of my next anthority; namely, Jornandes, who was bishop of Ravenna about A.D. 530, and himself of Gothic descent. In his history of the Goths, he deduces them from the island of Scanzia,—a derivation due more to the name it bore of Gothland* than to any capability it had for sending out such a numerous race as they were, and in my opinion due to this alone. He says that many and diverse peoples dwelt there, and among them names the Sorethans, the Vagoth, Bergio, Hallin, Liothida, the Athelnil, Finnaithæ, Fervir, Gautigoth, the Ostrogoths, Raumaricæ, *Rauquaricii,* Finni, Vinoviloth, Suetludi, and the Dani, who drove the Heruli from their country, and who among all the nations of Scanzia affect the greatest reputation. There are also the Grannii, the Agauzia, Unixæ, Ethelrugi, Arochiranisi, over whom Rodulf was king. These names are suggestive of a great deal of commentary; but on this occasion it will suffice to say that they bear unmistakable traces of the Teutonic speech about them, and are evidence of how great an infusion had then taken place. Jornandes makes the Goths, on leaving Scanzia, settle among the Ulnaenjii, on the banks of the ocean, a distinctly Norse name, and having conquered the Vandals, with many cognate tribes, advanced towards the Euxine, conquering on the way the Sclavi† and Antes.

In all this we see the Wendic and Lithuanian tribes, north of the Danube, gradually overpowered by Teutonic conquerors, driven away from their homes by others whose Teutonic blood was even more pronounced, such as the Dani; and we can, perhaps, trace the spread of the Norsemen,—but we may approach this from another point. Granting that there may be much foundation for the opinions I have stated to you, as to the gradual supersession of an inferior by a superior race in the north of Europe before the eighth and ninth century; there can be no question that, at those dates, this movement received a very sudden and pronounced accession of energy. Either an immigration of fresh tribes on a large scale, or a sudden seizing of its inhabitants with a religious or an adven-

* The Lithuanians call the Russians Guthes.

† Sclavi—first mentioned in 495—were driven north by the Bulgarians, and built Novgorod and Kief.

turous frenzy, can alone explain the facts they present us with; —either an advance of the main body in the track of the pioneers whom I have mentioned, or the preaching and dissemination of a stirring creed. For at these dates, and thence forward, we find the name and ensign of the Northmen advertised in every corner of Europe, founding a new aristocracy wherever it went, and leavening the stagnation of a long sleep, with objects and incentives to exertion.

The names borne by the new-comers offer us little assistance, —Norsemen or Normans are merely indices of geographical position in relation to France or Britain; Vikingr is descriptive merely of their occupation and status, namely, lordlings of the creeks. The name Dane offers, at first sight, more promise; but I have no faith in it. It has conjecturally many derivations. I confess to finding none so plausible as that the word Dane is identical with the root of Danube, Danester or Dniester, Tanais, or Don, etc., meaning water, and in our instance having reference to the marshy and watery nature of the peninsula of Denmark. I know of no mention of it earlier than Jornandes, as applied to a northern race; and in my opinion it means merely "marshmen," and is probably a free translation of Vikingr.

Simultaneously with the westernly piratical expeditions, to which I have made reference, we find, according to Nestor, and many other authorities, the eastern shores of the Baltic, the Russian provinces of Livonia and Great Russia, and the rivers running into the Black Sea and Caspian, subject to a similar scourge, known to the northern chroniclers as Varajians, or *werings*, and to the Byzantine writers—who had reason to know them, considering how their fleets had ravaged the shores of the Bosphorus, and penetrated to the Ægean,—they were known as "Rhas", or Russi. One of their leaders, Ruric, founded, as is well known, the first Russian dynasty at Novgorod; and many other names, such as Biorm, contained in the Byzantine chronicles, enable us to fix their nationality as Norse. This is confirmed remarkably by a passage of Constantine Porphyrogenitus who, in giving an account of the rapids of the Dneiper, gives their names in two forms, as known to the Russi and the Sclavonians. The former series have been elaborately discussed by Lehrberg, and have been shown to be most unquestionably Norse. To this may be added the fact that Nestor's account, and the traditions of the Russians, brings these invaders from the Baltic and the Swedish peninsula; and that in the descriptions of their fleets, weapons, and manners, we cannot be mistaken in at once identifying them with the Danes of the west,—and they have been, in fact, so identified by every inquirer into the subject.

We are justified in the generalisation, therefore, that while the Danes were regenerating the west, the same good offices were being performed for Russia by the Russi, giving their name to its wide tracts of marsh, and steppe, and mountain, and binding into something like a homogeneous whole the scattered tribes of Fins, Hungarians, Wends, and Sclaves, who then inhabited it. The early settlements of the Russians, or rather the area in which we first find them, contained Aldenborg (now Old Ladoga), Rotola, in the present gulf of Revel, Alaborg, in the gulf of Olonetz, and Holmgard in Archangel. The capital of the old Varajians was Biarma, on Lake Ladoga. It was hence the Byzantines brought them, Choniata calls them Northern Scyths, and when the Arab geographers mention them, it is also here that they are placed. Now, it is at least remarkable that in this very area, or as near it as ancient topography enabled men to know it, we find in classic times a nation,—familiar no doubt to most of you by name—the Rhoxolani, containing the same root, *rhos* or *russ;* and it is here that the anonymous Ravenna places them. This root has been derived from the Norse *rasu,* "to run", etc.,—a guess merely; a much more satisfactory, and to me perfectly conclusive etymology; one, too, adopted by the continental ethnologists, is found in the name given by the modern Fins, the collateral descendants of the Ugrian inhabitants of the Ukraine (from whom the Greeks would receive the name), to the Swedes and Norsemen of the present day. They call them Ruotsalanien, and their country Ruotsi. Ruotsalanien is word for word the same as Roxolani. Tacitus, in giving an account of the reign of Otho, A.D. 69, says, "that the Rhoxolani, a people of Sarmathia, who the preceding winter had cut off two cohorts, invaded Mæsia with 9,000 horse. Their weapons are long spears or sabres, of an enormous size, which they wield with both hands. The chiefs wear coats of mail, formed with plates of iron sewn on tough hides, impenetrable to an enemy's weapons, but very cumbrous to the wearer." If this description applies to any ancient tribes we know, it is surely to the northern pirates, with their iron armour and two-handed swords.

We must now fix their relations to other tribes in their neighbourhood. To do this, we must go to Strabo, who tells us, in speaking of Sarmathia, that in the inland dwell the Bastarnæ, and comprised with the Tyragetæ and the Germans; indeed they may almost be said to be of the German stock. They are divided into many tribes, as some are called Atmoni, some Sidones; those who inhabit the inland, Pence in the Danube, Periani; and the most northern, Roxolani,—these latter depasture the plains lying between the Don and the

Dnieper, whether any dwell still further than the Roxolani is unknown to us. However, the Roxolani fought against the generals of Mithridates Eupator; their leader was Tasius; they came as allies of Palarus, the son of Scilurus. In the winter, they encamp on the marshes near the Palus Mæotis, and in the summer on the plains. Here we find them, associated with other tribes, under the name Bastarnæ, and in a treaty with Hadrian, they are mentioned with them and the Daci. The Bastarnæ have always been held to have been Germans by ethnologists. Plutarch distinguishes them particularly for their brawny stature, bravery, and intense love of fighting. A fragment of Scymnus, quoted by Latham, makes them immigrants into the area they occupied. I hold these various facts to establish that the very heavy balance of evidence is in favour of our identifying the Norsemen with the Roxolani. We must now go further. The Fins call a Swede Ruots Alain: a German, Sax Alain; and a Livonian, Wir Alain, *alain* means "men" with them. The specific name *ruots* means, in Fin, "red-haired": thus, a red-haired cow is called *russ kia;* Roxolani, therefore, means "red-haired men". Now, this happens to be an exact translation of the term Sarmati,—*sar* or *saur* in Gothic, and *sarga,* in Hungarian, means "reddish yellow". *Mati* or *Meta,* "Medes", is derived from the Persic *mat* or *mad,* "tribe, people", a widely distributed generic name, which alone is found applied to these tribes in the inscriptions from the Bosphorus. Sarmatia is also called Sargatia by Ptolemy. Who, then, were the Sarmati? Latham, with a consistent zeal, always takes it for granted they were Sclavonians, and so do most English ethnologists; for this view there does not seem to me to be the slightest foundation. The Sclaves, as distinguished from their Wendic neighbours, appeared in Russia only when driven north by the Bulgarians. Strabo speaks of the Tauromatæ as synonymous with Scythians, and stations them on the plains between the Tanais and the Caspian; and speaking of the seventy Caucasian nations who assembled at Dioscurias, he says they were chiefly Sarmathians; in another place he associates them with the Bastarnæ. Herodotus tells us, the Sauromatæ talk the language of Scythia, but not correctly. This may mean something, as I shall show presently.

Far from making the Sarmati Sclaves, I conceive them to have been Teutons, bordered on the north by, perhaps, Teutons of purer blood, known to the Fins as Roxolani; that they bordered the northern shores of the Euxine, and were the ancestors of the emigrants who in later times founded the Gothic kingdom in the Crimea; that whether under the name of Roxolani, Bas-

tarnæ, or Sarmati, they were the same people or peoples; shading off into differences on their southern and western borders, becoming Daci on the one hand; and Vandals—the Wend Alainen of the Fins, whose kings were of Gothic blood—on the other. In many places, no doubt, especially in the steppe, corrupted very strongly with Ugrian characteristics; in the north, gradually recruited from the Caspian shores, becoming the ancestors of the Norsemen, founding there a state which once obeyed the strong arm of Mithridates,—the half-fabulous hero of more traditions than many are aware of. On his defeat by Pompey, and on the scattering of his peoples,—advancing further into individualism; and on the approach of Attila (after whose days we hear no more of Roxolani), rushing into their quarters in the north, and dislodging thence the troublesome pirates who gave their name to the Saxon shore.

The same area which is occupied by Sarmati in the accounts of some authors, is filled by others with a well-known name,—a puzzle to ethnologists,—the Alani: most make them a Turkish race, on very insufficient grounds. The name is word for word the Fin term Alainen, applied apparently indifferently to their neighbours. In the pages of the classical authors, however, it becomes specific. They are associated, by some writers, with the Peucini and the Bastarnæ; by some, with the Cestobocci and Roxolani; by others, with the Gothic tribes of Alaric, —all, be it remembered, of Teutonic blood. They added their cavalry to the Goths of Radagasus. They invaded Gaul A.D. 405; settled in Lusitania in 414; made another settlement about Valence and Orleans, and gave their name to Catalonia, etc. In all these cases it were hard to make them other than relatives of the Goths.

Ammianus (22, 8, 31), tells us that, around the marshes of the Mæotis, there are many tribes, differing in language and institutions. The Jaxamatæ and the Mæotæ, the Jazyges, and the Roxolani and the Alani . . . Close to the Riphean mountains live the Massagetæ, the Alani, and the *Sargetæ* (*i. e.*, the inhabitants of Sargatia). Again; to the east of the Tanais dwell the Alani, occupying a great area in the deserts of Scythia; they receive their names from the mountains they inhabit. Many nations whom they have conquered have adopted their names, as was the case with the Persians; among these in Europe are the Neuri, who occupy close to the sea, in a mountainous country, where they are hardened by the northern cold. The Geloni, very savage, who make clothes and horse-trappings out of their enemies' skins. . . . On the other side, westwards, and close to the Amazons, the Alani,—I am told their dwellings reach as far as the Ganges. . . . Again, I

will not name the many peoples known under the name of Alani, resembling each other in manners, ferocity, and method of waging war. They do not live in houses, nor do they know the use of the chariot; they live on beef and milk. They are good soldiers, and well disciplined. They were then bounded on the west by the Ostrogoths. Ptolemy places them to the north of the Massagetæ, towards the modern Kirghiz steppe. Pliny, at an earlier day, places the Alani in the same neighbourhood,—most subsequent writers put Roxolani. Numbers of them appear in the armies of Alaric; and by Claudian they are repeatedly mentioned as White Huns. It would be idle for me to quote from the authorities. Both the Chinese and Arabic writers have confirmed their position here; to both they are known under the name of Ala or Allan. The former date their first expedition westward, in B.C. 40, but it was only partial, as the Alanna were still found on the Jaxartes, which, by the way, is also called the Ross. In the second century, they are related to have overthrown the Greek kingdom of Bactria. Nicephorus Gregorius identifies them with the Massagetæ; Tacitus, with the Sarmati. I would rather condense the opinion I have arrived at from a close comparison of at least a hundred authorities,—that the Alani of Ammianus were of the same race as the Sarmati and the Roxolani. After the fifth century, history no longer knows the name of Alani, save as a Caucasian race, who were gradually driven into the mountains, as related by the Arabs. Their history thenceforward I meant to make the subject of another paper. The conclusion of it to be that the Ossetes of the Caucasus—the Iron, as they call themselves,—are the undoubted descendants of these Alani, with whom their traditions and a volume of proofs connect them. The Os, or As, is a noted name in ethnology. Their identification with the Alani removes all the difficulties about the Osiliens of Ptolemy,—the Jaxamates, which name Ammianus and others write for Sarmates,—the Asi of Æschylus and of the Argonautic legend, who gave their name to Asia.

I have here merely condensed the results of a long correlation of facts, which I hope to present in another place. This conclusion, however, if justified, ought to be checked by the comparison of the Ossetic customs and language with those of the Norsemen. There are few who have had opportunities of making such a comparison, the country of the Ossetes being almost unknown. The Baron de Haxthausen, one of the few who have penetrated it, was particularly struck with this resemblance; his pages teem with references to customs which are common to the two peoples. Klaproth, in his essay on

their language, refers at some length to the large infusion of Low German, which it contains; and this conclusion has been confirmed by Sjogern, who has written an elaborate grammar and vocabulary of the language.

We thus find evidence accumulating on all hands to justify us in drawing the race of the northern pirates from the head shores of the Caspian, and the plains, or rather marshes, north of the Caucasus. Among the rivers and pools of the regions of the Don long boats are still used, which travellers have referred to as similar to those described in the Saxon Chronicles. Here are found pillar stones and other objects neglected by antiquaries, which are covered with the earlier forms of runes, and furnish the best link in tracing the history of that strange alphabet to its fountain head in the Persian cruciform inscriptions. Here was placed the country of the Asi, whence Odin, according to the northern Scalds, brought his followers and his religion. Here was placed the half mythical Asgard, which the cuneiform inscriptions have at length rescued from the character of being no more than a poetic figment; the name Asagarta occurring repeatedly among them. Here may be found buildings to compare with and furnish explanations of the Picts' houses of the Orkneys. Here, within the limits of the Parthian empire may be found ornaments of silver and gold covered with the decorations also found in northern relics, and of which a large collection of armlets and bands discovered in England may be seen in the magnificent collection at Edinburgh. Here are still found iron workers, whose traditional skill is celebrated in the Arabian accounts of the Alani, and who may well be the descendants of the iron-loving smiths of the Eddas; and lastly, in this derivation may be found what, I venture to say, is the only explanation of the fact that of all living languages the Scandinavian are by far the most nearly allied to the Zend and other ancient forms of the Persian.

Own brothers these Norsemen were of the Parthians. The breaking up of the Parthian empire set many of them adrift no doubt. The Persian legends are full of accounts of them; the mountains of Affghanistan retain traces of them; the Chinese frontiers felt their influence, and they did the work of regenerating Europe.

The reason for their sudden energy in the eighth and ninth centuries are to be found in the commotions that were taking place in this area at those dates. The Mahometans were then in the full swing of their crusading spirit—if I may use the phrase. The Georgian and Armenian annals are full of accounts of their sweeping in among the mountains of the Caucasus, and of the new life which their arrival aroused there.

Many of the wild Kurdish and Caucasian religious legends trace their origin to this period, or mingling of two religions, parallel to the Gnosticism in Europe. The warlike tone of Mahomet's trumpet may perhaps find its distant echo in the war-cry of Naguar Lodbrog. The inexplicable intricacies of the Eddic faith may perhaps receive some light from an examination of the effects of a Mohammedan infusion into the strange religion of the Parthians. Not that of Zoroaster, the religion of its higher society, but that we find reflected on its engraved gems and sculptured stones.

It is this alone which can explain the very extraordinary fact that wherever Scandinavian relics are found in Ireland, in Orkney, in Denmark, in Sweden, there are also found heaps of Cufic coins and of the coins of the Caliphate; not many from Byzantium, few from the Latin kingdoms of the west, but absolutely thousands from these other sources. Some may be seen by those curious in such matters in Edinburgh, which were discovered with the silver remains I have referred to.

I have now done, and feel constrained to apologise for having trespassed so much on your patience. My only justification is to be found in the dim mystery which surrounds early European ethnology. In the fact that the key to its secrets is to be found in the gradual unravelling of later difficulties before we approach earlier ones, and that in the solutions I have ventured to present you, I humbly hope to have found a better solution of those difficulties than was current before.

XXIX.—*Life amongst the Veys.* By H. C. Creswick, Esq.

[*Read December 10th*, 1867.]

The geographical limits of the Vey country might be described to be: on the north, the river Gallinas and country of the same name; Little Cape Mount River, Liberian coast, to the south; the sea-beach on the west; and by the Gola and the Dey territories on the east. It is difficult to say exactly how far interior the dominion of the Vey people extends; I estimate it at from eighty to a hundred and twenty miles—an estimate which, I believe, is not far from the truth.

That this tribe has not always occupied a position on the beach is pretty evident, from the dissimilarity between their *physique* and that of their neighbours, as well as difference in language; besides which they have preserved amongst them a legend that indicates their origin to have been in or near the Mani country. This legend I shall give as I heard it from the mouth of an old chief, translating the native language as literally as respect to the sense will permit me.

Though the advantages of being on the seaboard for the purposes of trade doubtless induced most of the tribes now occupying those positions to come down from the interior, this, I believe, was not the cause of the Vey exodus from their paternal home. As our readers will learn, they were *expelled* from their country for grave offences against country laws; and this would account for the fact of their having lost all trace of their original name. This latter circumstance is noticed by Dr. Koëlle; but, from his not having heard the legend connected with the subject, he was unable to do more than conjecture the circumstances which compelled the exodus. Mohammedanism is spreading fast amongst the Veys; and teachers of that religion do not fail to meet with the greatest respect and consideration amongst them; whilst a singular tradition is current that they formerly belonged to that creed, and that sooner or later they will all embrace the faith of the Koran again.

LEGEND OF THE VEY IMMIGRATION.

"I speak of a long time past, hear. It is written in our old-time-palaver-books—I do not say *then*, in old time the Vey people had no book, but the old men told it to their children and they kept it; afterwards it was written. In that time

there was a country a long way to the East, where the Mani people lived, a country far, very far, away in the bush, over which a king reigned, who had two sons, called Faibule and Kiatambah. Now, although this country was far in the bush, the people were not like the rest of bushmen. They had fine towns like the Mandingoes, and to describe their towns they had a book also—the same book as the Mandingo nation. And all the time the people took the law of this book. But the people round them neither had a book nor any proper law; they went always in the bush to talk devil-palaver, and did sacrifices which were not liked by people who take the law of Mussa. So when the two sons of the king had grown up, their father took them aside one day as they walked amongst the rice, and made them swear never to be led away from the ancient faith of their people, and never on any account to consent to worship the devil or to go into the bush with the surrounding tribes for the purpose of any religious rites. Further, it was told to all the towns, at the beating of the great tamanden (war-drum), that death would be the certain punishment of any such departure from the law of their tribe. Now the bush people were very fond of play, and their women were both handsome and well grown, and the words of the old king did not deter the two young men from being seduced away, for they soon forgot everything but how to please the devil-women they had for wives. When the ill news came to the old king, his heart stood up in him, for the law was very strong with our tribe, and the young men were his own sons—their mother still lived in his house. And for her sake, and the intercession of some chief men, for the young men's good news had gone to many towns, he would not kill them; but he said: 'Go now; you have done those things which to our people are an abomination, and for which death may well be the punishment, but, remembering that you are our sons, and that your mother still lives, I send you away instead. Take therefore, my children, the slaves, the women, the goats, and the rice, that belongs to you, and to which I will add what shall be necessary, and go out from our people. Never shall your feet make tracks on our farms again, nor your mat be spread in our houses. Go, find some country where you can sit down, you and your people. Hear! I have done.' So the two called together their wives and slaves, their cattle and rice, and they got up from their country as their father had said. At this time the rice-farms had been planted one moon. And the two men and all their people walked the bush and could find no place to sit down. At last they came to the sea below here (Little Cape Mount River?); but the people were very hard, and would not let them sit

down. So they walked along the beach until they came beyond the mountains, and saw how fine the country was—for the rice was now nearly ready to cut. They sent to the head men of the country, and said to them: 'We have walked past eight moons and have found no place to sit down; give us, therefore, some place where we can spread our mats and we will be your friends; but, if you are unwilling to give us as friends that which we ask, we will take it by force, for some of our women can go no further.' But the tribe in whose country they had arrived would not hear them, so they sat down on the beach, determined to take the country for themselves as soon as all their people had come up.

"So Faibule and Kiatamba fought with their people against the inhabitants of this new country, killing a great many. Now it happened that at this time there were many palm-trees at Toso, and the warriors of the invaders went there to drink palm-wine. And one day Kiatambah wanted to drink, and, coming to the tree, saw in his path the coat (*i.e.*, skin) of an alligator, which he took home for his children. When he did so, the alligator was walking about to find something to eat, and so did not see that his coat had been stolen by Kiatambah; but one of the slaves of Zung,* who had hidden himself for fear close by, saw all that had happened, and when the alligator returned, informed him who had stolen his coat, and promised to get it back again for him. This was very good to the heart of the alligator, who, in return for the kindness, told the slave to go to his father and tell him he had some news to tell him which would be of great benefit to him and all the tribe. So the next day King Zung and his chiefs went out to hear from the mouth of the alligator, who, when they had found him, spoke these words: 'The people who come to fight you and take your country are too strong; before the next rice is cut, yourselves and women will all have been killed or made slaves of. Now, therefore, listen to my advice; and, because one of your people has recovered my coat for me, I will show you a way that you shall all escape the death that already is close at the house of every one.' The alligator then took them all to the margin of the lake, by Datea, where a large vine hung over into the water, and showed them how, by means of this vine, they could all descend to a beautiful town under the water. So they all went down, the king and his people with all their children, to the homes of spirits, where they sing and dance all the time. And sometimes when we pass our canoes that way, and the night is quiet, we hear

* The king of the place.

the noise of their playing; but no man looks over the side of the canoe, but in perfect silence we pull quickly past. If any one looks into the water, he will see the tops of the houses, and the spirits will call him so that he will be obliged to go.

"And because the alligator did this thing, we do not like to kill or trouble them."†

With regard to the period at which this emigration took place, I can have but a rough means of guessing, the Veys themselves being very inaccurate in the matter of dates which go back much beyond two generations. I should, however, be inclined to think that the period of their exodus might be quoted at between two and two and a half centuries ago. The period which they are described in the legend as having occupied in journeying from the Manies country to the one which they at present occupy—viz., about eight lunar months—may easily be accounted for, as, by their own story, the brothers started in a southerly direction until they came to the coast, when they changed their course to about north-west, and finally, nearly due north along the beach. African locomotion, moreover, is none of the speediest; besides which, their march must have been encumbered with women and young children.

This legend was told me by an old chief living at Mando, a town of the Veys, to whom I paid a visit of a few days. I have endeavoured to preserve as much as is possible in a translation the characteristic expressions of the country, with the exception that I have given the narrative uninterrupted by my frequent questions.

In physical appearance, the Veys are tall and well proportioned, generally stouter in build than the Mandingos or Temnes. Their features are regular, possessing none of the hideous grossness of the traditional "nigger", though somewhat more broad than those of the two great families above-named. I think the character given to them by some of the missionaries by no means deserved. They have characterised the women as "unchaste and shameless", the men as with "no other god than their belly". Against such a sweeping condemnation I must enter a most decided protest; and, as my experience was acquired by the closest daily intercourse with them in their native towns, I might be permitted to do so without presumption. That Vey ethics essentially differ from those of Europe I cannot deny, nor do I wish to infer that there are not many blackguards to be found here, as in every other country under the

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* At some towns I visited the alligator was held almost sacred; and a tame one was permitted to come into the town, without molestation, to look for food, with which it was regularly supplied.

sun; but what I do affirm is, that they will not only compare favourably with neighbouring tribes, both as to their mental and social condition, but would completely put to the blush most of the foreign settlements on the west coast, who have had the benefits (?) of civilisation. The Vey character is eminently light and buoyant. Dancing and playing are frequently kept up all night long during fine moonlight nights. The missionaries seem to be always looking at the subjects of their labours through the large end of a telescope, by which means they get a very distorted image—very small, and far off, and out of proportion; whereas, viewed with the actual eye, they are, after all, not so very far different from the old original stock as to be unrecognisable as members of one great family. Perhaps the sympathy and kindness I so frequently experienced from them has made me a partial chronicler; but am I to blame if the exhibition of an affectionate solicitude and kindly feelings claim the tribute of my good report? Such acts and feelings belong to no creed, colour, or country, but are inherent in the large-hearted of all times and regions. What willing hands tended me in many hours of sickness—fanned my fevered cheek, or applied the coldest water to my heated brow! How untiring were those nimble feet, which day after day scoured the bush in search of the most famous "medicines"! And shall I forget the voice that chanted for my amusement the songs of Hurah, soft and musical to a sick man's ear, for they told of kindness aud sympathy?

Although, like all African tribes, the Vey people are superstitious, they compare favourably in this respect with most other Africans I have been amongst. Gregrees are an institution with old and young, freemen and slaves, and are worn for all sorts of purposes. In war times particularly, the important leaders may be seen almost loaded with charms of different kinds and degrees of virtue. But I am inclined to believe that the best of them place very little real faith in their efficacy. On one occasion I remarked to a great leader, "Why do you wear all these charms and medicine? You surely do not believe that they can save you either from gun-shot or sword-cut." "Well," said he, "but they make our men more fearless, as most of them place implicit confidence in war medicine; and we do all we can to encourage such a belief." A painful example of how far a belief in the bodily appearance of his satanic majesty acts on the nervous system is to be found in the fact that persons are occasionally found suffering from a very violent and distressing species of fit, concerning which it is impossible to get any information further than that the patient has seen "the devil"! In the cases of women, who are

most liable to these diabolic attacks, the devil is of the male sex; but the male sex are visited, according to native report, by a demon of the opposite sex! I once witnessed a very bad case of this kind of possession. It was in the person of a young married woman, at the time in a condition to be more easily affected through the medium of the imagination. However this may be, there was no doubt but that the attack was severe, and might, in her condition, have proved dangerous, if her friends had not been in the way to take charge of her. There is a wild staring of the eyes, though apparently without the power of distinguishing objects; low moaning, interrupted by frequent and loud shrieking. If patients were not restrained by a considerable amount of force, they would do themselves and others injury by their violent contortions. When the patient came to herself, she appeared perfectly well again, though exhibiting signs of great fatigue. Her sister accounted for the attack by stating that she had that evening *washed after sunset*, contrary to her advice. This, it seems, is a fruitful source of such attacks, or at least is reported to be so. The friends of the patient endeavour to make her tell the name of the devil by whom she is possessed; for, as soon as she is sufficiently conscious to do so, he will immediately go out. Now, I do not pretend to explain the scientific nature of this species of malady; nor can I assign a reason for the supposition entertained by the natives that the devil has any hand in it, except, indeed, the general one, that savage tribes often ascribe to supernatural agencies phenomena which they are unable to account for in their philosophy. They are very careful of young children, lest they should become the objects of witch malice; and it is the custom for women who are about to be confined to dress very plainly, in order not to excite the ill nature of those "bad people".

Foretelling future events is believed in to a great extent; and professors of the art, who are usually Mohamedans from the north, are invariably consulted before any important step is taken. "Cutting sand", as it is termed, is the most common mode. Professors of the occult sciences will also guarantee to provide you with "medicine" either to render yourself invisible, or put others into a profound sleep, or render you invulnerable. Tricks of sleight of hand are sometimes played, but I saw nothing that would compare to Indian feats of this kind. The most clever was the drinking of a twenty-four gallon cask of palm-oil, and its subsequent ejection again. How the deception was practised I could not detect. They firmly believe in some persons who, they say, can kill you in a secoud by their mere volition. There is a dangerous rock in the Mafa river,

which is never passed without giving a tribute, either a leaf of tobacco, a handful of rice, or drink of rum, as a peace-offering to the spirit of the flood.

Vey notions of religion, if indeed we might dignify such crude ideas by that name, are of the most vague and shadowy kind. They generally believe in the existence of a God of some kind or another, but hardly can give you an explanation, further than that, when they die, they will all go to his country. Of the dangers of taking another route they have no fear, since Vey divinity seems to ignore that side of the question altogether, except those who have imbibed the belief of the Koran.

They believe that any and every prayer to the Supreme Being will always be answered, whether its objects be good or bad; for example, if a man says, "God send me a dark night to roll this stone," they believe that it will be sent; and if the owner of the stone says, "God, make me know who has robbed me," his prayer will also be answered. They have the idea that the bad man's prayer will be answered as readily and fully as the good man's.

A few of the chief men of the country profess Mahommedanism, but for the most part it is kept in a very loose way. On one occasion I had the following conversation with an old warrior on the subject of religion.

I.—"Why do Vey people take the law of Mussa; they do not know the Mandingo book; why, therefore, do they not take the white man's book, as you all believe it is the best one?"

Finiamo.—"You talk true; we do not know the Mandingo's book very well, but they come to our towns and make 'medicine' for us, and tell us of their book, which the white men do not; and it is very hard to learn a new book. But our children's children will certainly all have your book."

I.—"But how is it that you, who have good sense, do not leave the Mandingo's and take our law?"

Finiamo.—"Well, you see, the Mandingo book-man tells us that if we do not take their law when we die we shall all go to hell (dsahannamâ). Now I am old, and if I begin to learn a new religion at my time of life, I may die before I have learned enough of your book; and having rejected that of the Mandingo, in that case I should certainly go to hell, as I should have no book at all!"

The Mandingo is usually the schoolmaster, as he is also the priest; but it appears to me that his ministrations in either office are not so effective as could be wished. The slaves are as a rule far more ignorant, and therefore infinitely more superstitious than the free people, a state which we should more

justly describe as their misfortune rather than their fault, as they are generally kept hard at work in the farms. The following curious specimen will serve as an example:—

We arrived at a Vey half-town late at night during the continuance of a tornado which had commenced shortly before. We were surprised to hear, above the din and crash of the elements, the voice of the natives calling out at the top of their voices some words in the Gola tongue. On approaching nearer the habitations we could distinguish the words, which were translated to the following effect:—

"We did not do it."—"We never did anything wicked."—"It was that other man who lives a long way off," etc., etc. This cry was kept up till the tornado had passed over. It was evident that they believed the storm was sent to punish them for some delinquency, and that they could induce its removal by lying.

Places for teaching, or the worship of the Koran, are not common, being found only in a few of the larger and more important towns. I was on one occasion present at the mosque, —for the African Mohamedans of the west coast are by no means so exclusive as most of their creed,—and was much amused at what I suppose must be called a sermon, preached by a Mohamedan professor. The whole discourse took a very practical turn, inculcating rules of forbearance and politeness in all relations of life. But what was most strange was, that some of the congregation would frequently interrupt the preacher, by asking questions on points which they did not quite comprehend,—a system which appeared to be quite correct and usual. The teacher was remarking on the disagreeable way that many creditors had of asking for their debts,—perhaps learnt by experience; when one of the hearers interrupted him with the question, "But, is it wrong for a man to collect that which is due to him?" "Certainly not," said the preacher; "but he should go to his debtor softly and ask him to pay, and if he could not do so, he was to wait a reasonable time to enable him to collect funds for the purpose, and not to sell or take in pawn his slaves or children." I thought this rather a dangerous theory. Vey ethics are not particularly strict in this matter of debt-paying.

APPENDIX.

VOCABULARY OF INHABITANTS OF SAU-O BAY.

[*This Vocabulary, belonging to Dr. Collingwood's paper on the Inhabitants of Sau-o Bay, had not come to hand at the time when we were obliged to print the paper, as stated in the note on p.* 143 *of the present volume. We are now enabled to give it in an Appendix.*]

Vocabulary of words used by the native inhabitants of Sau-o Bay, East Coast of Formosa.

NUMERALS.

1, E-tah (or Issah) [M. & J.]
2, Lú-sah [M. & J.]
3, Too-roo [J.]
4, Soó-pah
5, Lómah (or Emah) [M. & J.]
6, In-um [M. & J.]
7, Pē-tou [J.]
8, Ah-roo (or Ah-loo) [J.]
9, Sē-wa [J.]
10, Stĕ-reĭ
Ten is also represented by *Wón ei*, thus:
11 is *Wón-ei is-sah*
12, Won-ei lu-sah
13, Won-ei too-roo
19, Won-ei se-wa

(20 requires the other word for *ten*)
20, Lú-sah stĕ-reĭ
21, Lú-sah stĕ-reĭ issah
22, Lú-sah stĕ-reĭ lú-sah
29, Lú-sah stĕ-reĭ sē-wa
30, Too-roo stĕ-reĭ
40, Soó-pah stĕ-reĭ, and so on to 90
Hundred, see-voo [J.]
100, issah see-voo [J.]
200, Lú-sah see-voo [J.]
300, Too-roo see-voo [J.]
400, Soó-pah see-voo, &c.
1000, Issah ra-ra-ran
1866, Issah ra-ra-ran ah-loo see-voo in-um stĕ-reĭ in-um

PARTS OF THE BODY.

Head, *hoo-roo* [M. & J.]
Hand, *roo-kahp*
Eye, *mah-tah* (Malay) [M.]
Nose, *hoo-nóong* [M.]
Teeth, *bun-ga-rôu* [M.]
Hair, *moo-koōse*
Whiskers, *moo-moōse* (also *beard*)

Calf of leg, *rah-pan*
Buttock, *poo-noon*
Breast, *ta-roo-nah*
Arm, *ree-mah*
Knee, *too-sol*
Thigh, *pa-na-ni-yan*
Foot, *ree-kan*

Man (male), *ma-roo-nah-nee*
Woman (the female), *ta-roo-ang*
(The first includes *boys*, the second *girls*)
Children (boys or girls), *soo-niss*
Old man, *na-ka lan*
Old woman, *vai-va-lam*

Themselves (*i.e.*, the tame aborigines) *ka-ba-lan*
The Chinese, *bo-soos*
The wild aborigines of the hills, *ma-too-mal*
Mother, *te-na*

ARTICLES OF DRESS AND FURNITURE.

Coat, *hoo-loōse*
Stick, *baa-ram*
Belt (either round waist or fillet round head), *bar-oon*
Hat (native bamboo), *ro-co*
European hat, *koo-boo*
Jacket, *hoo-loōse*
Trousers, *ku-un* or *kwun*
Shoe, *la-po*
Petticoat, *lappi-yan*

———, *ma-san*
Bag or pocket, *roo-boōse*
Cigar, *rai-poot*
Beads, *e-toose*
Bottle, *bras-co*
Wood, *broo-oor*
Silk, *see-reet*
Fishing net, *tchú-e*
Roof of house, *rah-poo*
Linen, *see-u*

Pearl button, *tou-ear*
Merino, *nee*
Red tape, *trang-e-tang*
Knife, *sa-rick*
Worsted, *ong-lee-pee*
Cotton, *see-rah*
Thread, *tim-re-an* (native manufacture)
Hut, *rap-pou*
Native cloth, *ha-bah*

ANIMALS.

Paddy bird (heron) *ah-lárm*
Dog, *wah soo* [J.]
Cock, *drach-hook* (guttural)
Hen, *tec-na-na*
Hen's eggs, *soo-soo-see-na*
Echinus, *ka-na-sow*
Crab, *wah-rang*
Butterfly, *boo-row*
Pig, *ma-woo-nee*
Fish, *vow-hoot*
Fishing, *ta-pong-i-tchue*
Goat, *koo-loo-boo-lan*

ARTICLES OF FOOD.

Sugar (loaf), *wan-ing*
Boiled rice, *mai-ee*
Rice, *brass* (Malay)

ELEMENTS, ETC.

Rain, *oo-rahn*
Wind, *var-lee*
Sun, *ner-lun* [M. & J.]
Surf (on beach), *nar-een* [M.]
Fire, *ra-mah*
Rain, *moo-zan*
Brass, *pa-oo*
Iron, *bah-lis*
Silver coin, *pe-lah*

MISCELLANEOUS.

Reed pipe, *wah-koo-par-in*
Wood pipe, *kwa-ko*
Broom, *kai-sing*
Matchlock, *rah-pil-sa*
Tree, *ba-rin*
Slate, *va-vow*
Hills, *ta-kerr*
Junk, *wa-pi*
Copper cash, *ka-ri-sew*
Rice straw (thatch), *rra-mi*
Lily, *soo-a-yee*
Grass (or dried plant of same), *brun*
Yes, *ai-e*
No, *mo* (Chinese)

NAMES OF MEN.

Sai-ah-nee
Mah-now
Too-bah
Pah-keek

NAMES OF WOMEN.

E-pai-ee
Kin-lee-yán
Moo-hoot
Sing-ow
Ar-pée (a young girl)
Sow-bahn

NOTE.—All the above words are to be pronounced just as they are written, with English pronunciation. An accent has been placed upon some syllables, just to show the prominent part of the word; and the circumflex over the *r*'s show that they should be *trilled* or *rolled*. The *r*'s and *l*'s were in many cases used indifferently by the same person, and appear to be interchangeable.

[*Note by the President.* — The vocabulary of Dr. Collingwood contains nineteen words of Malay or Javanese, or of words common to these two languages. In all likelihood they come immediately from the Philippine languages, the more considerable of which all contain a certain number of Malayan words, although not the more essential ones to language. Most probably Formosa, although little larger than Sicily, will be found to have several languages, conformably to the numbers of the tribes into which its aboriginal inhabitants are divided. The vocabulary of a language of Formosa was published a few years ago at Batavia, called the Forlong, which bears little resemblance to the specimens given by Dr. Collingwood, and contains a much smaller proportion of Malayan words.—J. C.]

TABLES BELONGING TO DR. SHORT'S PAPER.

The Dorus of Jeypore.

No.	Age—years.	Height—ins.	Circumference of Head.	Circumference of Neck.	Circumference of Chest.	Circumference of Arms.	Circumference of Thighs.	Weight—lbs.	Length of arms.	Breadth of hands.	Length of legs.	Length of foot.	Breadth of foot.		Names.
1	25	67½	21¼	13	34	11	18	140	31½	3½	41	10½	3½	8½	Boothoora
2	24	62¾	19½	12	31	9	15½	104	29½	3	38½	10¼	3¼	7½	Pothalum
3	21	62¾	20½	11½	29	8½	15	95	30¼	3	38	10	3	7	Sunnapee
4	35	62¾	20	12	31	9½	16	104	29¾	3½	38½	9¾	3½	6½	Cogo
5	19	63	21	11½	31½	9¼	16½	103	30	3	38	10	3	7	Worthun
6	24	66½	21½	12½	31	9	16½	113	30½	3½	40	10½	3½	7¼	Somaree
7	26	63½	20	12½	31	9	17	103	30½	3¼	38½	10	3½	7	Ramadoo
8															

Parjahs or Ryots of Jeypore.

No.	Age—years.	Height—ins.	Circumference of Head.	Circumference of Neck.	Circumference of Chest.	Circumference of Arms.	Circumference of Thighs.	Weight—lbs.	Length of arms.	Length of hands.	Breadth of hands.	Length of legs.	Length of foot.	Breadth of foot.	Remarks.	Names.
1	17	62½	21	12	30	9	16¼	110	Average 28 inches.	7 ,,	3½ ,,	37 ,,	10 ,,	3¼ ,,	Growth of hair on forehead to root of nose, 3 inches.	Sonkarah
2	22	64½	20	12	32	9½	16¾	118								Byradah
3	24	63½	21	12¼	30	9½	16	104								Sonkarah
4	20	62	20¾	12	30½	9½	15½	104								Somah
5	18	62½	19¾	11½	29½	9¼	16	105								Sidah
6	24	62	19½	11½	31	9¼	15½	101								Sonkarah
7	35	63½	21	13	33	9½	17½	115								Kythah
8	22	63½	20	12	31	9	16½	118								Byradah
9	18	64¼	21	13	31	9¼	16½	111								Sonkarah
10	20	63½	20	12½	32	9½	17½	111								Sidah
11	30	62½	20½	13	32	9¾	18½	111								Kythah
12	22	63¼	21	12½	31½	9½	17	110								Somah
13	16	59	19½	11	26½	8	15	82								Somah
14	19	64¾	21	11½	30¼	9	16	110								Boothoo
15	25	65½	20	12	31	8½	16¼	118								Untharoo
16	35	67¾	21½	12½	33	10	18	132								Sunniah
17	25	60	20¾	12	31	9¾	16½	105								Gassee
18	22	62	20½	12½	31	9¼	17	115								Boothee
19	18	61¼	20¼	11½	30½	9	17	117								Sunniah
20	20	63½	20¼	12½	31½	9	16	113								Thasooroo
21	24	62½	21	12½	31	9½	17	118								Untharoo
22	30	66¾	21	13	32	10	17	123								Gooroo
23	40	64¼	20½	12¾	32½	10	17½	120								Randoo
24	30	60½	20	11½	30½	9	16½	106								Jogy
25	32	58½	19½	11	29	9	15	94								Chythoo

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REPORT OF THE COUNCIL

OF THE

ETHNOLOGICAL SOCIETY OF LONDON.

MAY 1867.

THE Council can, as on the preceding anniversary, report the satisfactory condition of the Society during the year which is just completed. The accession of new members has been greater than in any one year for some years past, and the increase of the Society's numbers has been considerably greater than during previous years. The number of Fellows who have retired during the year is very small. The following new Fellows have been elected since the anniversary of 1866.

HIS HIGHNESS THE MAHARAJA TUMANGUNG.
DR. JOHN SCOTT.
THOMAS SCOTT, ESQ.
ALFRED R. WALLACE, ESQ.
ROBERT LEVINGE SWIFT, ESQ.
COLONEL ALBERT FYTCHE.
WILLIAM EUING, ESQ.
THOMAS BRADDLE, ESQ.
DR. ROBERT JAMES MANN.
SIR SAMUEL BAKER.
FREDERIC STANLEY CARPENTER, ESQ.
ARTHUR LENNOX, ESQ.
ARCHIBALD ROBERTSON, ESQ.

H. H. Howorth, Esq.
J. Thompson, Esq.
The Librarian of the Library of the Corporation of London.
J. C. Hotten, Esq.
Henry Ashworth, Esq.
Andrew Maclure, Esq.
William Henry Simpson, Esq.
J. Langlands, Esq.
James Ashbury, Esq.
H. A. Husband, Esq.
James Hepburn, Esq.
Dr. Hyde Clarke.
John Ramsay, Esq.
George Rogers, Esq.
Dr. Rokay (*Corresponding Member*).

The papers read and discussed at the public meetings have been quite equal in character to those of preceding years; and the Council has the satisfaction to report that the last annual volume of *Transactions* has met with general approval, and that its sale to the public is becoming a valuable item in the Society's receipts. The papers read since the anniversary meeting in 1866, and the exhibitions which have led to discussions, have been—

1866.

June 12. Exhibition of a series of Original Drawings of the Antiquities of the Ancient Ruined Cities of Mexico. By M. de Waldeck.

" On Cæsar's Account of Britain and its Inhabitants in reference to Ethnology. By John Crawfurd, Esq.

" A Memoir of the late Dr. Hodgkin. By Dr. Richard King.

June 26. A Collection of Bronze Celts found in Italy. Exhibited by Hodder M. Westropp, Esq.

" A Bronze leaf-shaped Sword and a Bronze Spoon. Exhibited by Lord Dunlo.

June 26. A Drawing of a Bronze Dagger, said to have been found at Wroxeter, in Shropshire. Exhibited by T. WRIGHT, Esq.

" An interesting Antiquarian Discovery recently made in Ireland. By E. A. CONWELL, Esq.

" An Account of the Discovery of an Ancient Manufactory of Stone Implements at Pressigny, in France. By Sir JOHN LUBBOCK, Bart.

July 10. On the Inhabitants of the Basin of the Nile. By Sir SAMUEL BAKER.

" On the Andaman Islanders. By Colonel FYTCHE.

" On Vancouver's Island. By Dr. SHORTT.

Nov. 6. On the History and Migration of Cultivated Fruits in reference to Ethnology. By JOHN CRAWFURD, Esq.

Nov. 20. Account and Explanation of a Patagonian Skull. By Professor HUXLEY.

" On the Caffres of Natal. By Dr. MANN.

" On the Ethnological Results of the Arabian Conquest of Spain. By JOHN CRAWFURD, Esq.

" Remarks on some of the bearings of Archæology upon certain Ethnological Problems and Researches. By ROBERT DUNN, Esq.

1867.

Jan. 8. On the Wild Tribes of Central India. By Lieut.-Colonel DALTON.

" On the Migration of Cultivated Plants in reference to Ethnology—Sacchariferous Plants. By JOHN CRAWFURD, Esq.

Jan. 22. On the Plurality of the Races of Man. By JOHN CRAWFURD, Esq.

Feb. 12. On the Vegetable and Animal Food of the Natives of Australia. By JOHN CRAWFURD, Esq.

" Some remarks on Winds and Currents in regard to Scottish Ethnology. By Mr. JOHN CLEGHORN.

Feb. 26. On the Archæology of Bronze. By H. H. HOWORTH, Esq.

March 12. Contributions to the Ethnology of the Chinese. By Dr. LAMPREY.

" On the non-Hindu Tribes of the Borders of Hindustan. By the Hon. GEORGE CAMPBELL.

March 26. On the Skulls of the Ainos, Chinese, Hottentots, Kaffirs, and Burmese. By Professor BUSK.

" On the supposed Aborigines of India, as distinguished from the Civilised Inhabitants. By JOHN CRAWFURD, Esq.

April 9. On the Ancient European Mines. By Dr. HYDE CLARKE.

" On the Classification of the Races of Man according to the Form of the Skull. By JOHN CRAWFURD, Esq.

April 23. A Visit to the Kibalan Village of Sau-o Bay, on the North-east Coast of Formosa. By Dr. COLLINGWOOD.

" On the Colour of the Skin, the Hair, and the Eyes, as tests of Race. By JOHN CRAWFURD, Esq.

May 7. On the Darien Indians and the Ship Canal. By Dr. CULLEN.

" On the Civilisation of the First Icelandic Colonists. By JON A. HJALTALIN.

" Further Remarks on the Ethnology of the Chinese. By Dr. LAMPREY.

It is hardly necessary to say more than that additions have been made both to the Museum and to the Library, and that it is proposed to proceed with the printing of a catalogue of the latter with the beginning of the new year. The Council has again to congratulate the Society on the flourishing state of its finances. The balance of the Treasurer's account is larger in fact even than that of the preceding year.

Statement of Account of FREDERICK HINDMARSH, *Treasurer, with* THE ETHNOLOGICAL SOCIETY OF LONDON, *from the* 22*nd of May,* 1866, *to the* 21*st of May,* 1867.

		£	s.	d.
To balance as per last account on May 22nd, 1866		164	11	6
„ Subscriptions of Members for the Current and Past Years	£285 1 0			
Less commission	16 16 4			
		268	4	8
„ Cash of Mr. Murray on Sale of Society's *Transactions*	£ 9 19 0			
	21 14 8			
		31	13	8
		464	9	10

	£	s.	d.
By Rent and Insurance	40	6	9
„ Refreshments and Attendance at Evening Meetings	59	13	8
„ Mr. Mackie as assistant to the Secretary	40	0	0
„ Mr. Richards for Printing	128	6	0
„ Mr. Wright for Expenses and Editing the *Transactions*	43	10	0
„ Messrs. Bruce and Ford (Stationers)	5	17	3
„ Gratuity to Mr. Suggate of the Royal Geographical Society	1	0	0
„ Balance	145	16	2
	464	9	10

Examined May 21, 1867,

WILLIAM BLACKMAN, HARRINGTON TUKE, } *Auditors.*

THE PRESIDENT'S ADDRESS.

Six years have passed since your indulgence first placed me in the chair of this Society, and now at the close of my third term of office, I think it will be satisfactory to you that I submit a brief retrospect of our career from the time in question. With this view, I shall compare the present state of the Society, not with its state immediately before 1860, which was one of considerable decadence, but with its condition in 1846, three years after its foundation, when it was considered to be prospering. In so far as finance is concerned, our income in that year £299 : 12 : 9, and our expenditure £253 : 2 : 4, left a balance with the Treasurer of £46 : 10 : 5, but the expenditure did not include what is the largest item of our present outlay, the cost of printing a volume of *Transactions*.

Our present income, arising mainly from increase of Fellows, is £464 : 9 : 10, and our expenditure £318 : 13 : 8, leaving in the Treasurer's hands a surplus of £145 : 16 : 2. In 1846 the subscriptions and compositions amounted to £180 : 4 ; and in the present year they were £285 : 1. To our income at present are to be added the profits of the sale of our *Transactions*, an item which had no existence before 1861.

During the first thirteen years of the Society there were published four volumes of *Transactions* under the name of a "Journal," containing in all 1,269 pages. In the six years from 1861, we have published five volumes, making 1,968 pages, and thus the extent of our publication has been multi-

plied above three-fold. Our *Transactions*, I am glad to be able to report, are so favourably received by the public that the profits arising from the few we are able to spare are equivalent to the subscriptions of fifteen town, or thirty country members. I may add that a sixth volume is in an advanced state of readiness, and will be published before the end of the year.

Our meetings have been well attended, while the discussions which have followed the reading of papers have been animated, and, I hope, instructive, the public taking such an interest in our proceedings that the press renders an adequate account of them without any effort at publication on our own part. As to the supply of papers, I have great pleasure in stating that it is ample, and indeed, at present, far beyond what can be read in the short remainder of the current Session, even if we should be obliged to have recourse to one, or even to two extra meetings in July.

I think, then, that I may safely congratulate you on the success which has attended the course we have been pursuing, and which leaves no cause for envying the prosperity of any association of the same character with our own, foreign or domestic.

J. C.

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OF THE

ETHNOLOGICAL SOCIETY OF LONDON.

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Ethnological Society of London,

FOR THE

STUDY OF THE HUMAN RACE IN ALL ITS VARIETIES, AND IN ALL THE PHASES OF ITS HISTORY AND PROGRESS.

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LIST OF FELLOWS

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*Members who have paid a Composition in lieu of Subscriptions are indicated by a *.*

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